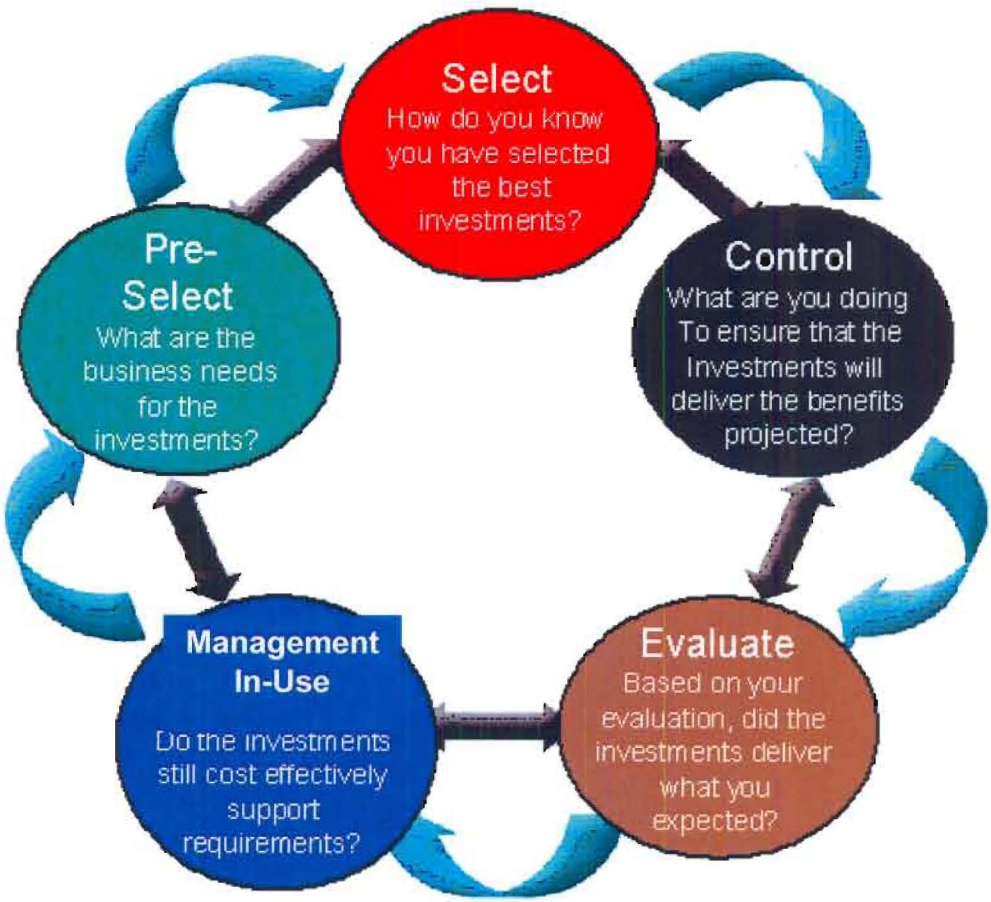
# Department of the Interior

# Construction Capital Planning and Investment Control Guide

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**Department of the Interior**

**Construction Capital Planning and Investment Control (CPIC) Guide**

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# EXECUTIVE SUMMARY

The United States Department of the Interior (DOI) invests over $1 billion on new construction and rehabilitation projects annually. The success of construction investments directly influences the ability of bureaus[1] within DOI to execute business plans and fulfill missions.

Over the past few years, legislative and Administration mandates have been introduced aimed at: 1) ensuring that investments in constructed assets are sound; and 2) improving mission performance of the Federal government through more effective strategic, financial, and acquisition management. A significant Administration mandate is the Executive Order 13327 on Federal Real Property Asset Management (E.O. 13327) which promotes efficient and economical life-cycle management and use of Federal real property assets.[2]

E.O. 13327 is complemented by the following two important pieces of legislation, the Federal Acquisition Streamlining Act of 1994 (FASA) and the Clinger-Cohen Act of 1996 (CCA) that require Federal agencies to strengthen Capital Planning and Investment Control (CPIC). The E.O. 13327, FASA and CCA have introduced a new level of rigor to the way agencies approach project selection, acquisition, and management of an asset over an entire useful life. The President's Management Agenda that sets milestones for implementing E.O 13327, reinforces the FASA's performance-based management system emphasis on cost, schedule and performance discipline and the CCA's emphasis on improving mission performance realized through a rigorous and repeatable CPIC process. DOI and the bureaus must balance their attention between the planning and selection of projects and the need to ensure the projects stay within budget, schedule and scope.

A well defined, effective CPIC process, compliant with the guidance and direction set forth in the Capital Programming Guide V 2.0[3], a supplement to Office of Management and Budget (OMB) Circular A–11, helps ensure that DOI will achieve its mission and goals. The DOI CPIC process, as set forth in this DOI Construction CPIC Guide, complies with appropriate administrative mandates, laws and regulations.

This DOI CPIC Guide identifies the processes, activities and outputs necessary to ensure that DOI's construction investments are well conceived, cost-effective, and support the DOI and bureau missions and business goals. This Guide is based on direction and guidance

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[1] The term "Bureaus" includes Departmental Offices.

[2] DOI defines assets as owned and leased buildings, structures, linear assets, and non-stewardship land used for administrative purposes. Non-stewardship land is considered to be the land associated with constructed assets such that it would be impractical to try to separate for sale. DOI also defines the motor vehicle fleet as an asset.

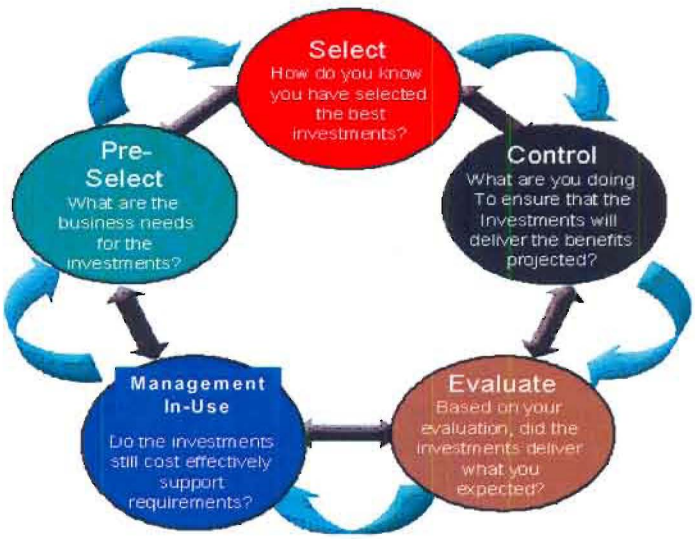
[3] The Capital Programming Guide V 2.0 , issued in June 2006, is a supplement to Office of Management and Budget Circular A–11, Part 7: Planning, Budgeting, and Acquisition of Capital Assets and can be found at <http://www.whitehouse.gov/omb/circulars/a11/current_year/part7.pdf.>.

from the Office of Management and Budget (OMB) (and the Capital Programming Guide), United States Congress and the General Accountability Office (GAO).

This Guide describes the current state of CPIC and the future direction for CPIC; identifying and articulating processes and measures. This Guide updates the DOI Information Technology (IT) and Construction Capital Planning and Investment Control Guide V1.0 [4] and will be periodically modified to incorporate best practices and lessons learned. (This updated Guide only covers and refers to CPIC for constructed assets and construction projects and does not cover or refer to CPIC for IT assets or IT projects.) The Department will continue to explore and adopt enhancements to DOI's governance of capital assets, as well as to find avenues for best depicting and communicating the DOI CPIC process

This Guide continues to emphasize multi-year investment planning as a key element within the scope of the CPIC process. Multi-year plans will be prepared for construction investments. The current Five-Year Deferred Maintenance and Capital Improvement Plan is used for long-term planning and budgeting. The Plan will be analyzed as part of CPIC investment portfolio management and will be reviewed to identify potential opportunities to consolidate similar investments into a larger, more effective investment. All bureaus must employ a certified CPIC process to evaluate and manage major and other construction investments.

The CPIC process within the bureau and at the Departmental level is a circular flow of DOI's construction investments through five sequential phases, depicted below, highlighting fundamental questions necessary to select and govern projects.




[4] Reference to IT CPIC and IT projects is found in the Office of the Chief Information Office's (OCIO) IT CPIC Guide which is available on the OCIO website at <http://www.doi.gov/ocio/>.

Beyond the detailed CPIC process description, this Guide also includes:

- Board procedures for the DOI decision-making bodies, a model for the Bureau investment review boards and the associated operating procedures necessary to conduct investment reviews
- The scoring criteria to be used by the executive decision-making and investment review boards during investment reviews
- Guidance on preparing a benefit-cost analysis, calculating earned value, assessing risk, using value engineering, etc.
- A glossary of terms, key personnel and acronyms used throughout this document
- A list of references used to create this document.

The construction CPIC process is supported and maintained within DOI by Policy, Management and Budget's (PMB) Office of Acquisition and Property Management and Office of Budget. For further information about this Guide or construction investments, and construction CPIC guidance, please contact the Office of Acquisition and Property Management at 202-208-3329 and the Office of Budget at 202-208-4967.

# CHAPTER 1—CPIC GUIDE PURPOSE, BACKGROUND AND OBJECTIVES

## 1.1 Purpose

This DOI CPIC Guide identifies the processes, activities and outputs necessary to ensure that DOI's construction investments are well conceived, cost-effective, and support imissions and business goals. The Guide is based on direction and guidance from the Office of Management and Budget (OMB) (and the Capital Programming Guide), United States Congress and the General Accountability Office (GAO).

This Guide describes the current state of CPIC and the future direction for CPIC; identifying and articulating processes and measures. This Guide updates the DOI Information Technology (IT) and Construction Capital Planning and Investment Control Guide V1.0 [5] and will be periodically modified to incorporate best practices and lessons learned. (This updated Guide only covers and refers to CPIC for constructed assets and construction projects and does not cover or refer to CPIC for IT assets or IT.)

The DOI bureaus are to use this DOI CPIC Guide, along with the Capital Programming Guide V 2.0, to help establish, implement and maintain a capital programming process within each of their components and across the organization. Effective capital programming uses long range planning and a disciplined, integrated budget process as the basis for managing a portfolio of capital assets to achieve performance goals with the lowest life-cycle costs and least risk. This process should provide agency management with accurate information on acquisition and life-cycle costs, schedules, and performance of current and proposed capital assets.

The DOI Construction CPIC Guide is comprised of the following four chapters.

- Chapter 1 – CPIC Guide Purpose, Background and Objectives (this chapter).provide an overview of the Administration and Legislative mandates behind the development of CPIC within DOI and the Federal government, the aim or intent of the Guide, guide change control and contacts
- Chapter 2 – CPIC Program Elements provides a description of the significant components of the DOI CPIC program and related processes including CPIC objectives, CPIC program management approach, thresholds for capital programming, roles and responsibilities, project management, the Integrated project team, etc.
- Chapter 3 – CPIC Process by Phase defines the construction CPIC process applied to major projects and presents the governance roles and responsibilities according to the five CPIC phases.
- Chapter 4 – Appendices provide guidance on preparing a business case and establishing and sustaining a capital planning and investment control program.

[5] Reference to IT CPIC and IT projects is found in the Office of the Chief Information Office's (OCIO) IT CPIC Guide which is available on the OCIO website at <http://www.doi.gov/ocio/>.

## 1.2 Legislative Background and Associated Guidance

The United States Department of the Interior (DOI) invests over $1 billion on new construction and rehabilitation projects annually. The success of construction investments directly influences the ability of bureaus[6] within DOI to execute business plans and fulfill missions.

Over the past few years, legislative and Administration mandates have been introduced aimed at ensuring that investments in constructed assets are sound and at improving mission performance of the Federal government through more effective strategic, financial, and acquisition management. These new requirements and the emphasis on strengthening the management of real property asset including the governance of portfolio of construction investments has forced management throughout the federal government to assign accountability, reduce spending, eliminate wasteful management, and maximize the value of investments.

DOI, along with other federal agencies, are directed to incorporate thorough planning, risk management, full funding, portfolio analysis, and cost effective life cycle management into their CPIC process and investments. The legislation encourages agencies to integrate the CPIC process with the processes for making budget, financial, and program management decisions.

The applicable legislation and guidance includes the:

- Executive Order 13327 on Federal Real Property Asset Management (E.O. 13327)
- The Chief Financial Officer (CFO) Act of 1990
- The Government Performance and Results Act of 1993 (GPRA)
- The Federal Acquisition Streamlining Act of 1994 (FASA)
- The Paperwork Reduction Act of 1995 (PRA)
- The Clinger-Cohen Act of 1996 (CCA)
- The Government Paperwork Elimination Act of 1998 (GPEA)
- OMB Circular A-11, Preparation and Subrnission of Budget Estimates
- OMB Circular A-130, Management of Federal Information Resources

This CPIC Guide is based upon capital asset planning aspects of these mandates. The Guide focuses specifically on the E.O. 13327, FASA and CCA requirements. Though CCA addresses IT related issues, the Act has relevance to and can be applied to the life-cycle management of construction investments. The CCA's objective is that senior managers design and use a CPIC process to systematically maximize the benefits of capital investments. The Act prescribes that the CPIC process:

- Provide for the selection of investments to be made by the executive agency, the management of such investments, and the evaluation of the results of such investments;

[6] The term "Bureaus" includes Departmental Offices.

- Be integrated with the processes for making budget, financial, and program management decisions within the executive agency;
- Include minimum criteria to be applied in considering whether to undertake a particular investment, criteria related to the quantitatively expressed projected net risk-adjusted return on investment and specific quantitative and qualitative criteria for comparing and prioritizing alternative information systems investment projects;
- Provide for identifying investments that would result in shared benefits or costs for other Federal agencies and State or local governments;
- Require identification of quantifiable measurements for determining the net benefits and risks of a proposed investment; and
- Provide the means for senior management to obtain timely information regarding the progress of an investment, including a system of milestones for measuring progress, on an independently verifiable basis, in terms of cost, capability of the system to meet specified requirements, timeliness, and quality.

The E.O. 13327, FASA and CCA require Federal agencies to infuse rigor to the way they approach project selection, acquisition, control and management in-use over an entire useful life. These mandates have forced DOI and other federal agencies to continuously re-evaluate and, as necessary, revise how they do business and address life-cycle management requirements, from conception of a project to disposal of owned and leased constructed assets. The President's Management Agenda that sets milestones from implementing E.O 13327, reinforces the FASA's performance-based management system (PBMS) emphasis on cost, schedule and performance discipline and the CCA's emphasis on improving mission performance through the rigorous and repeatable CPIC process.

The most recent and significant Administration mandate is the Executive Order 13327 on Federal Real Property Asset Management (E.O. 13327) which promotes efficient and economical life-cycle management and use of Federal real property assets.[7] E,O. 13227emphasizes the:

- Establishment of senior management accountability;
- Development and implementation of a strategic agency asset management plan;
- Use of performance metrics in decision-making;
- Gathering and maintenance of accurate and current inventory; and
- Disposal of unneeded assets.

DOI's implementation of EO 13327 has led to the establishment of a strengthened DOI-wide Asset Management Program with emphasis on the effective management of real property assets. Through more effective asset management. DOI and its bureaus will be better able to meet program outcomes and mission. The DOI Asset Management Program has introduced asset management guidance, practices and tools designed to give managers the

[7] DOI defines assets as owned and leased buildings, structures, linear assets, and non-stewardship land used for administrative purposes. Non-stewardship land is considered to be the land associated with constructed assets such that it would be impractical to try to separate for sale. DOI also defines the motor vehicle fleet as an asset.

methodologies and means to strengthen the management of assets and improve the governance and decision-making required of a sound capital planning and investment control (CPIC) program. The implementation of asset management guidance, practices and tools associated with the Asset Management Program has resulted in valued-added components integral to the strengthening of CPIC Departmentwide.

E.O. 13327 is complemented by the following two important pieces of legislation that require Federal agencies to strengthen Capital Planning and Investment Control (CPIC):

- The Federal Acquisition Streamlining Act of 1994 (FASA), requires that agency heads to employ PBMS to better manage the agency portfolio of major acquisitions so projects stay within 90 percent of the individual investment's cost, schedule and performance goals. When developing the cost, schedule and performance goals on developmental projects with significant risk, project managers must provide the investment review boards with risk adjusted cost, schedule and performance goals.
- The Clinger-Cohen Act of 1996 (CCA) seeks to improve mission performance by requiring agencies to clearly define and implement a CPIC process for selecting, controlling, and assessing investments. Though focused primarily on information technology, the requirements of the Act do apply to construction investments.

### 1.3 Aim of This Guide

A well defined, effective CPIC process, compliant with the guidance and direction set forth in this CPIC Guide and the Capital Programming Guide V 2.0[8], a supplement to Office of Management and Budget (OMB) Circular A–11, helps ensure that DOI will achieve its mission and goals. The DOI construction CPIC process, as set forth in this Guide, complies with appropriate administrative mandates, laws and regulations. It supports and is a significant component in DOI's overall strategy to strengthen asset management as defined in the DOI Asset Management Plan. An effective CPIC process ensures that DOI's investments are supported by a strong business case and are based on objective criteria and support the mission and goals of the bureau, Department and the Federal government. As noted in the Capital Programming Guide V 2.0, that in general, OMB only considers recommending for funding the President's budget priority capital asset investments that comply with good capital programming principles.

This Guide stresses the importance of all phases in the capital asset life-cycle. The DOI CPIC process, as set forth in this Guide, complies with appropriate administrative mandates, laws and regulations including the guidance and direction prescribed in the

[8] The Capital Programming Guide V 2.0 , issued in June 2006, is a supplement to Office of Management and Budget Circular A–11, Part 7: Planning, Budgeting, and Acquisition of Capital Assets and can be found at http://www.whitehouse.gov/omb/circulars/a11/current_year/part7.pdf.

Capital Programming Guide V 2.0[9], a supplement to Office of Management and Budget (OMB) Circular A–11.

This Guide is intended to provide an overview of the DOI's Construction CPIC program and processes that constitute the program. The Guide is designed to supplement detailed formal project management training and general CPIC awareness training by providing DOI managers and staff with practical information designed to help them better understand capital asset planning, control and management and meet OMB, Congressional and DOI requirements. It also provides the framework within which DOI can formulate, justify, manage, and maintain a portfolio of construction investments.

This Guide continues to emphasize multi-year investment planning as a key element within the scope of the CPIC process. It outlines a framework for DOI and its bureaus[10] to effectively manage its construction investment portfolio. This investment management process allows DOI to optimize the benefits of constrained construction resources, ensure investments meet the strategic needs of DOI (**see Appendix P—Strategic Planning-President's Management Agenda**), and comply with applicable laws and guidance.

This Guide specifically describes the governance process for any major rehabilitation, remodeling, expansion or new construction project with cost of $10 million[11] or higher for any building, site improvement, utility system, water or wastewater treatment facility, Federal Highway Administration/Department of Transportation-funded road and trail, dam safety modification or any other constructed assets. However, the presence of an investment in another budget category other than construction, such as maintenance, or from sources such as recreation fees does not preclude following the DOI CPIC process including the preparation of a business case.

The governance process described in this Guide covers the life-cycle planning and investment control of major investments. For other construction investments (not deemed major), bureaus are to establish a similar CPIC process that emulates the steps and requirements of the following five phases of a systematic CPIC process.

- **Pre-Select Phase.** Provides a process and mechanism to assess an investment's support of agency strategic and mission needs.

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[9] The Capital Programming Guide V 2.0 , issued in June 2006, is a supplement to Office of Management and Budget Circular A–11, Part 7: Planning, Budgeting, and Acquisition of Capital Assets and can be found at <http://www.whitehouse.gov/omb/circulars/a11/current_year/part7.pdf.>.

[10] The term "Bureaus" includes Departmental Offices.

[11] Projects between $2 million and $10 million require a business case that is reviewed, selected, and managed through the bureau-level CPIC program.

- **Select Phase.** Provides tools to ensure construction investments are chosen that best support the agency's mission and that support DOI's approach to enterprise architecture.
- **Control Phase.** Provides guidance to ensure that construction initiatives are conducted in a disciplined, well-managed, and consistent manner that promote the delivery of quality products and result in initiatives that are completed within scope, on time, and within budget.
- **Evaluate Phase.** Provides guidance on comparing actual to expected results once a project has been fully implemented.
- **Management In-Use Phase.** Provides a means to assess mature systems to ascertain their continued effectiveness in supporting mission requirements and to evaluate the cost of continued support or potential retirement and replacement. For construction investments, this phase is also referred to as "Facility Maintenance."

### 1.4 Guide Change Control

DOI will continue to explore and adopt enhancements to DOI's governance of capital assets, to improve capital planning, control and management of investment through strengthened processes and practices, best practices and lessons learned. As the implementation of the CPIC process continues to mature and the capabilities of those responsible for aspects of the CPIC process are strengthened through training and experience, the CPIC process defined in this Guide needs to be continually reviewed and evolve. The Guide will be updated on a periodic basis to reflect lessons learned and best practices. Under a formal change-control system, the Guide will be modified by a board comprised of staff from the Department and the bureaus. Modifications will be recommended to the Asset Management Team, which serves as the executive-level construction investment review board for approval.

### 1.5 Points of Contact

The CPIC process is supported and maintained within DOI by Policy, Management and Budget's (PMB) Office of Acquisition and Property Management and the Office of Budget. For further information about this Guide or the overall CPIC process, please contact the Office of Acquisition and Property Management at 202-208-3329.

# CHAPTER 2—CPIC PROGRAM ELEMENTS AND REQUIREMENTS

To strengthen asset management and address the Administration and legislative mandates, the Department of the Interior (DOI) has implemented a comprehensive Capital Planning and Investment Control (CPIC) process to ensure that its portfolio of construction projects adequately addresses DOI's mission goals, and is managed to achieve the expected benefits in accordance with accurate and complete cost, schedule, technical, and performance baselines.

Monitoring and controlling current investments in the project portfolio is as important as selecting the right investments to add to the portfolio. Control mechanisms have been established and updated to aid in minimizing the likelihood of project failure or excessive cost and schedule overruns. However, the success of these mechanisms requires management commitment and accountability, and the dedication of resources to manage projects and the portfolio. As DOI's implementation of the CPIC process continues to mature, the effectiveness of these mechanisms will be more fully realized.

## 2.1 Capital Planning and Investment Control Objectives

CPIC is a structured, performance-based, integrated approach to managing the risks and returns of capital assets for a given mission. The CPIC process provides for the annual cycle of selection, continuous control, life cycle management, and evaluation of construction investments. The process is focused on the effective use of investment resources to carry out the Department's mission and goals.

CPIC requires discipline, executive management involvement, accountability, and focus on risks and returns using quantifiable measures. CPIC is crucial to the successful management of all capital investments with special emphasis on high dollar value, high risk, and complex construction projects. The objective of the CPIC process is to deliver substantial business benefit to DOI and return on investment for the taxpayer throughout the life cycle of an investment. Some specific objectives are to:

- Achieve DOI's mission and goals;
- Balance potential benefits against costs and risks;
- Align proposed system investments with strategic and intermediate goals;
- Measure performance and net benefit for dollars invested;
- Provide continuous feedback to help senior managers make decisions on new or ongoing investments; and
- Ensure that taxpayer dollars are spent effectively.

These objectives are achieved through the five phases, pre-select, select, control, evaluate, and management in-use of the CPIC process described in this Guide (see **Figure 1-1—CPIC Information and Process Flow**). The phases typically include decision points in which executive boards review and approve a project's entry to the next phase or stage, based on satisfactory completion of exit criteria from the prior phase or stage.

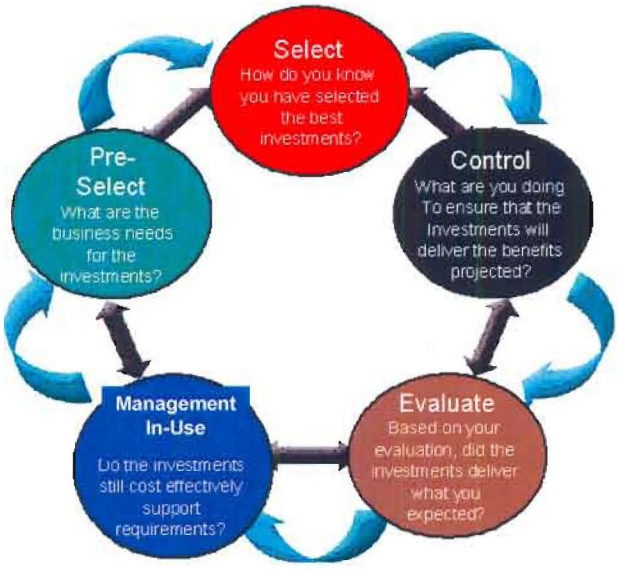



**Figure 1-1. CPIC Information and Process Flow**

Specifically the five phases have the following attributes:

- **Pre-Select Phase**—Senior bureau decision-makers assess each proposed investment's support of DOI's strategic and mission goals and incorporates it into a multi-year investment plan. Project stakeholders compile the information necessary for developing a preliminary business case supporting multi-year plans. Individual project proposals are assessed, prioritized and identified as a major project (meeting the prescribed thresholds defined in this guide) in a multi-year plan by each bureau's and the Department's IRBs.
- **Select Phase**— Bureaus prepare comprehensive business and investment analyses for proposed construction investments that are thoroughly reviewed within the bureau. Bureau and Department IRBs review and approve the major construction projects[12] that best support the mission of the organization, strategic plans, and support DOI's approach to enterprise architecture. Approved investments are entered in the budget process or alternative funding sources are identified.
- **Control Phase**— DOI and its bureaus ensure, through timely oversight, quality control, and executive review, that construction initiatives are executed and managed in a disciplined and consistent manner and are meeting cost, schedule, scope, and performance goals. Earned Value Management Systems must be in place to track a project's progress and serve as an early warning indicator of possible challenges ahead. Well-defined Corrective Action Plans are required for investments that exceed pre-set variances for cost, schedule, and performance goals. A change in the established and approved project baseline is always the last corrective action to be considered to address project variances.

[12] The threshold for major construction projects is found in Section 2.4 of this chapter.

- **Evaluate Phase**— Actual results of the implemented projects are compared to performance goals to assess investment performance. This is done to assess the project's contribution to carrying out DOI and bureau missions and identify any project changes or modifications that may be needed. In this phase, construction projects move from implementation or termination to warranty and maintenance.
- **Management In-Use Phase**[13]— All capital investments are assessed to ascertain their continued effectiveness in supporting mission requirements, evaluate the cost of continued maintenance, assess potential life cycle improvement opportunities, and consider disposition and/or replacement options.

A well defined, effective CPIC process, compliant with the guidance and direction in this DOI CPIC Guide and set forth in the Capital Programming Guide V 2.0, a supplement to OMB Circular A–11, helps ensure that DOI will achieve its mission and goals. The DOI CPIC process complies with appropriate administrative mandates, laws and regulations. It supports and is component in the DOI's overall strategy to strengthen asset management as defined in the DOI Asset Management Plan. An effective CPIC process ensures that DOI's investments are supported by a strong business case and are based on objective criteria and support the mission and goals. As noted in the Capital Programming Guide, that in general, OMB will only consider recommending for funding the President's budget priority capital asset investments that comply with good capital programming principles.

### 2.2 The Key Components DOI's CPIC Program

Recognizing the importance of construction investments, DOI is engaged in an ongoing effort to establish, maintain, and support a capital asset investment analysis and decision-making environment. The CPIC environment defined in this Guide consists of three key components: executive decision-makers, supporting tools, and repeatable processes described below:

- **Executive decision-makers** consists of the:
  - Management Excellence Council (MEC);
  - Management Initiatives Team (MIT);
  - Asset Management Team (AMT) (This executive-level investment review board is supported by the inter-bureau Asset Management Partnership and CPIC Coordinators);
  - Bureau Heads and bureau investment review boards;
  - Project sponsors, project managers and integrated project teams.

These key decision-makers oversee the Department's and/or the bureaus' CPIC program and processes and are stakeholders in the success of the CPIC program and the success of individual projects and the portfolio of individual projects that comprise the CPIC program.

[13] In the DOI Information Technology (IT) and Construction Capital Planning and Investment Control Guide V1.0, this phase was identified as the Steady-State phase. For construction investments, this phase is also referred to as "Facility Maintenance."

- **Tools**— To aid in managing and tracking individual major projects, DOI uses the Quarterly Scorecard Project Progress Report for all projects, and the Variance and Change in Baseline Report for those projects at variance. These reports enable DOI and bureau executive decision-makers, project sponsors and managers, and CPIC program managers to review, analyze, and report the progress of projects. Significant portfolio management tools established and implemented through the DOI Asset Management Program for managers at all levels to track and assess assets over time include the:
  - The DOI and bureau-specific Asset Management Plans (AMP) and the companion Rolling Three-Year Timeline which address the life-cycle requirements of buildings, structures and linear assets and provide a roadmap to continue the transition from a project-centric to portfolio-centric management approach establishes a strategic direction for the management of assets within the DOI portfolio;
  - Site-Specific Asset Business Plans used as a tool by managers in the field for performance metrics to be displayed and analyzed for decision-making;
  - Consolidated inventory of DOI real property assets with key data on descriptions, status and performance metrics, maintained within the government-wide Federal Real Property Profile (FRPP);
  - Standard methodologies for measuring performance such as the Federal Real Property Council (FRPC) required first tier metrics of condition, mission dependency, utilization and operating costs;
  - Dashboard of DOI performance metrics and targets for tracking FRPC first tier metrics and DOI second-tier metrics to provide a snapshot in time of the overall Department and individual bureau's progress in strengthening asset management of the real property portfolio; and
  - FRPP Performance Assessment Tool to aid in identifying assets that are at the end of their useful life and are candidates for disposition.

  Furthermore, DOI will initiate the use of the web-based Electronic Capital Planning and Investment Control (eCPIC) System (or a successor system), to help manage and control initiatives, portfolios, and investment priorities, as well as electronically prepare and submit budget data to the OMB.

- **Processes**—CPIC is the DOI-wide process and practice for (1) making investment decisions about individual projects regardless of size and prioritizing the overall portfolio, (2) creating and analyzing the rationale for these investments over their life cycle, and (3) managing its investment portfolio. As summarized below, this Guide describes the CPIC process in detail. The DOI AMP and the Three-Year Rolling Timeline were crafted, in part, to support CPIC and establish direction in managing DOI's diverse asset portfolio, and supporting divergent DOI missions and Departmental and bureau management structures.

These three CPIC components of executive decision-makers, tools and processes are significant to the successful implementation of the DOI AMP and enabling the transition from a project-centric to a portfolio-based approach. This approach is to better ensure that managers:

- Make effective business and operational investment decisions on assets that contribute to the mission and strategic goals;
- Manage assets to optimize utilization, improve effectiveness and efficiency, and promote regulatory compliance and stewardship;
- Optimize the portfolio of owned and leased assets, including space management composition and utilization;
- Build on and utilize historical accomplishments and current methodology to promote improvements in asset management; and
- Manage heritage assets in a way that considers the preservation of historic, archaeological, architectural, and cultural values.

In an era of constrained budgets, DOI has limited resources to allocate to capital investments for new construction and for the repair and rehabilitation of existing real property assets. Managers Departmentwide need to ensure that investment in constructed assets are well-conceived and sound and that they support the Department mission and goals.

DOI has implemented a comprehensive Capital Planning and Investment Control (CPIC) process which is still maturing. It is designed to ensure that the portfolio of construction projects adequately addresses DOI's mission and goals, and is managed to achieve the expected benefits in accordance with accurate and complete cost, schedule, technical, and performance baselines. Monitoring and controlling current investments in the project portfolio is as important as selecting the right investments to add to the portfolio. Control mechanisms have been established and updated to aid in minimizing the likelihood of project failure or excessive cost and schedule overruns. However, the success of these mechanisms requires management commitment and accountability, and the dedication of resources to manage projects and the portfolio. As DOI's implementation of the CPIC process continues to mature, the effectiveness of these mechanisms will be more fully realized.

The Department will continue to explore the use of a "Self-Assessment Guide toward Portfolio Management Maturity" to measure CPIC asset program and portfolio management success within the Department and the bureaus. This guide is based on the Information Technology Investment Management (ITIM) process maturity stages, issued by the GAO described in **Figure 1-2 below**. The ITIM maturity stages can be used as a guide to measure DOI's and its bureaus' progress in strengthening its CPIC process and management of their portfolio of construction projects.

| MATURITY STAGE | DESCRIPTION | CRITICAL PROCESSES |
|---|---|---|
| **Stage 1 – Creating Investment Awareness** | There is little awareness of investment management techniques. Capital asset management processes are ad hoc, project-centric, and have widely variable outcomes. | • No Defined Critical Processes |
| **Stage 2 – Building the Investment Foundation** | Repeatable investment control processes are in place and key foundation capabilities have been | • Investment Review Board Operation<br>• Project Oversight |

| MATURITY STAGE | DESCRIPTION | CRITICAL PROCESSES |
|---|---|---|
| | implemented. | • Asset Tracking<br>• Business Needs Identification for Projects<br>• Proposal Selection |
| **Stage 3 – Developing a Complete Investment Portfolio** | Comprehensive capital asset portfolio selection and control processes are in place that incorporate benefit and risk criteria linked to mission goals and strategies. | • Construction Authority Alignment of Investment Review Boards<br>• Portfolio Selection Criteria Definition<br>• Investment Analysis<br>• Portfolio Development<br>• Portfolio Performance Oversight |
| **Stage 4 – Improving the Investment Process** | Process evaluation techniques focus on improving the performance and management of the organization's capital investment portfolio. | • Post- Occupancy Evaluations<br>• Portfolio Performance Evaluation and Improvement |
| **Stage 5 – Investing for Strategic Outcomes** | Investment benchmarking and change management techniques are deployed to strategically shape business outcomes. | • Investment Process Bench-marking<br>• Business Process Change Management |

**Figure 1-2. GAO Information Technology Investment Management (ITIM) Process Maturity Stages**

The DOI CPIC process will be periodically updated to reflect the issuance of new or revised mandates and guidance. A list of investment management reference guides and memos is contained in **Appendix U—References.**

### 2.3 Management Approach

All construction projects within DOI must comply with this CPIC Guide. All construction projects must be reviewed by bureau investment review boards. Construction projects that are considered to be "major" and strategic investments for the Department are required to be included in the DOI capital investment portfolio (as noted in the following section of the Chapter on "Thresholds for Capital Programming").

All bureaus must employ a similar certified CPIC process to evaluate and manage major and other construction investments (see **Appendix N—CPIC Process Assessment** for the criteria to be used to certify the bureaus' CPIC process for evaluating and managing major and other capital construction investments). A "certified" process requires the recommendation of the AMT and the approval by the DOI Senior Real Property Officer (Deputy Assistant Secretary for Business Management and Wildland Fire). In a certified CPIC process, bureau heads must approve multi-year plans, new capital construction investments and corrective action plans for major and other investments at variance with

cost, schedule and/or performance baseline. In support of the bureau head, a bureau investment review board reviews and provides recommendations on individual investments and the bureau investment portfolio (**see Appendix S—Portfolio Management**).

For Departmental and bureau CPIC programs, adherence to the following six "DOI CPIC Ground Rules" is critical to building a sound, credible, sustainable program.

**"DOI CPIC Ground Rules"**

- All bureaus and offices must employ a certified Capital Planning and Investment Control (CPIC) process to evaluate and manage major and other capital construction investments:
  - Bureau head approval; and
  - Bureau Investment Review Board review and recommendation.
- All major investments require a business case in the form of the Exhibit 300[14] and all non-major require a business case in the form of a Project Data Sheet.
- Thresholds for investments proposed for Departmental approval will be established based on the maturity of the bureau CPIC process.
- Major Investment business cases are to be presented in a complete, accurate and timely OMB Exhibit 300 format utilizing the Electronic Capital Planning and Investment Control (eCPIC) System[15] or a successor system (**see Appendix L— eCPIC Requirements by Phase)**.
- Proposed investments with no or inadequate business cases will not be proposed for funding.
- For ongoing investments: additional funding, change of scope, or time extensions beyond the baseline in the approved Exhibit 300 must have a detailed corrective action plan. Such requests require bureau and Departmental CPIC review and recommendation by the Asset Management Team and OMB approval.

A certified bureau CPIC process within DOI must establish and maintain a project management and portfolio management capability to:

- Identify capital asset projects (new and in management in-use) necessary for the bureau and Interior to meet mission and performance goals consistent with the President's Management Agenda and the Department's and the bureaus' strategic plans;
- Collocate activities of the bureaus and the Department to take advantage of economies of scale and shared facilities. Partner with other bureaus and other agencies whenever possible;
- Prioritize capital asset projects to better manage overall program budget needs;

[14] Exhibit 300 is a form provided in OMB Circular No. A–11, Part 7, Section 300 — "Planning, Budgeting, Acquisition, and Management of Capital Assets" for documenting the business case of all capital investments including construction investments. The Exhibit 300 can be accessed through http://www.whitehouse.gov/omb/circulars/a11/current_year/s300.pdf

[15] The Electronic Capital Planning and Investment Control (eCPIC) System is a web-based application to help manage and control initiatives, portfolios, and investment priorities, as well as electronically prepare and submit budget data to the OMB.

- Invest in new projects and or maintenance of existing assets that are mission critical with emphasis on health and safety requirements;
- Select the capital asset project alternative that has the best value/highest benefit to cost ratio;
- Use value engineering to ensure project life cycle costs are the lowest possible and reduce project risks where appropriate (**see Appendix Q—Value Engineering**);
- Adhere to effective project management principles, employ CPIC practices and techniques provided in the Appendices to this Guide and, importantly, assign formally trained and certified project managers to ensure that projects are completed on schedule and within budget, and fulfill the defined project scope;
- Modify or terminate projects that are over budget or behind schedule;
- Ensure accountability for results and performance of each project throughout its life cycle;
- Monitor ongoing and completed projects and associated constructed assets for performance; and
- Identify when to dispose or replace investments that are not cost efficient to operate and maintain, no longer meet the mission needs, not utilized, and/or in poor condition.

Multi-year investment planning is a key element within the scope of the CPIC process. Multi-year plans will be prepared for construction investments. The current Five-Year Deferred Maintenance and Capital Improvement Plan is the basis for multi-year construction plans. Capital investments regardless of size in the areas of construction should be represented on one of these plans. The plans are used as a basis for long-term planning and budgeting. They are analyzed as part of CPIC investment portfolio management and reviewed to identify potential opportunities to consolidate similar investments into a larger, more effective investment.

### 2.4 Thresholds for Capital Programming

The CPIC process is useful for all long-term investments in capital assets. As defined in Circular A–11, Part 7 and the Capital Programming Guide V 2.0, major acquisitions are capital assets that require special management attention because of their importance to the agency mission; high development, operating, or maintenance costs; high risk; high return; or their significant role in the administration of agency programs, finances, property, or other resources. Major acquisitions will be separately identified in DOI's budget. For small dollar investments relative to the DOI bureau's budget, the bureau will develop a programming process based on the basic tenets presented in this Guide. DOI will have a stratified capital programming process involving more or less detail and review based on the size or strategic importance of proposed investments.

Full analysis and management attention should be applied to capital assets (including major modifications or enhancements to existing systems) that meet the criteria for a "major project" as defined in this section.

Major construction projects meet at least one of the following criteria:

- The total planning, design and construction costs are greater than $10 million[16]
- Directly supports the President's Management Agenda Items of "high executive visibility"
- Multiple-bureau and/or agency projects
- Other significant projects requested by OMB

These investments are considered to be strategic for the Department and thus require greater documentation as well as Departmental CPIC review and approval. DOI provides a business case in the form of an Exhibit 300 to OMB and included in the DOI and the bureau capital investment portfolio. Without exception, all construction projects with a total planning, design and construction cost between $2 million and $10 million also require business cases that are selected and managed through the bureau-level CPIC program and bureau investment review board(s).

### 2.5 Roles and Responsibilities

Departmental and bureau management decision-making and reviewing bodies play an ongoing role in managing the CPIC process. The governing and approval bodies are responsible for ensuring that new investments, investments under development and those in management in-use or maintenance mode meet DOI strategic, business, and technical objectives. Their membership and operations are documented and they meet periodically. The Department's governance hierarchy described below is also diagrammed in **Figure 1-3—DOI CPIC Governance.**

**Management Excellence Council (MEC)** is responsible for validating recommendations from the Management Initiatives Team (MIT) and the Asset Management Team (AMT) and recommending strategic investments for the Secretary's approval. The MEC also serves as an appeal board for MIT and AMT decisions. Its members consist of the Assistant Secretaries and Bureau heads and is chaired by the Secretary and vice-chaired by the Deputy Secretary.

**Management Initiatives Team (MIT)** is responsible for recommending strategic investments for the MEC, validating recommendations of the AMT and serving as an appeal board for AMT decisions. Its members consist of Deputy Bureau Directors and Deputy Assistant Secretaries, chaired by the Assistant Secretary for Policy, Management and Budget (PMB) with support and coordination by the Office of Acquisition and Property Management and Office of Budget on construction-related issues.

**Asset Management Team (AMT)** is responsible for oversight of the Departmental CPIC Process including the Five-Year Deferred Maintenance and Capital Improvement Plan, and review of the quarterly progress of current major projects. Serves as the DOI construction investment review board with responsibility for articulating the Department's

[16] The cost of the operation and maintenance of the project assets are not included in determining the total cost of the project but must be factored into project decision-making such as selecting the best alternative.

investment strategy, validating investment scoring from the CPIC Coordinators (a working group that supports the AMT), prioritizing investments, resolving duplication of efforts, identifying project integration opportunities, recommending strategic investments and priorities for the MIT. The Asset Management Partnership, a standing committee within DOI under the AMT authority, supports the AMT on matters related to real property asset management. The Space Management Partnership and the Heritage Asset Partnership also provide support to the AMT.

The AMT, as the Department's construction IRB, reviews the scoring and recommendations of the CPIC Coordinators and makes decisions on whether the project proceeds and makes decisions on approved projects that are in the CPIC control and the evaluate phases. MIT and MEC validate the AMT decisions.

The AMT also oversees the implementation of the DOI Asset Management Plan and the status and performance of investments in the management-use phase. The AMT assesses how well potential major investments meet a predetermined set of capital planning decision criteria, identifying duplication of efforts and providing recommendations to the MIT. It ensures the timely reporting to the bureaus of Secretarial, MEC and MIT decisions, with the assistance of the Office of Budget, the Office of Acquisition and Property Management and other Policy, Management and Budget (PMB) staff offices.

The Deputy Assistant Secretary for Business Management and Wildland Fire as the Senior Real Property Officer chairs the AMT as well as provides guidance and oversight to the AMT on matters related to CPIC governance. This AMT is comprised senior Departmental officials and bureau Senior Asset Management Officers with responsibility for facility management and implementation of Executive Order 13327. The Chair is supported by the Office of Acquisition and Property Management and Office of Budget.

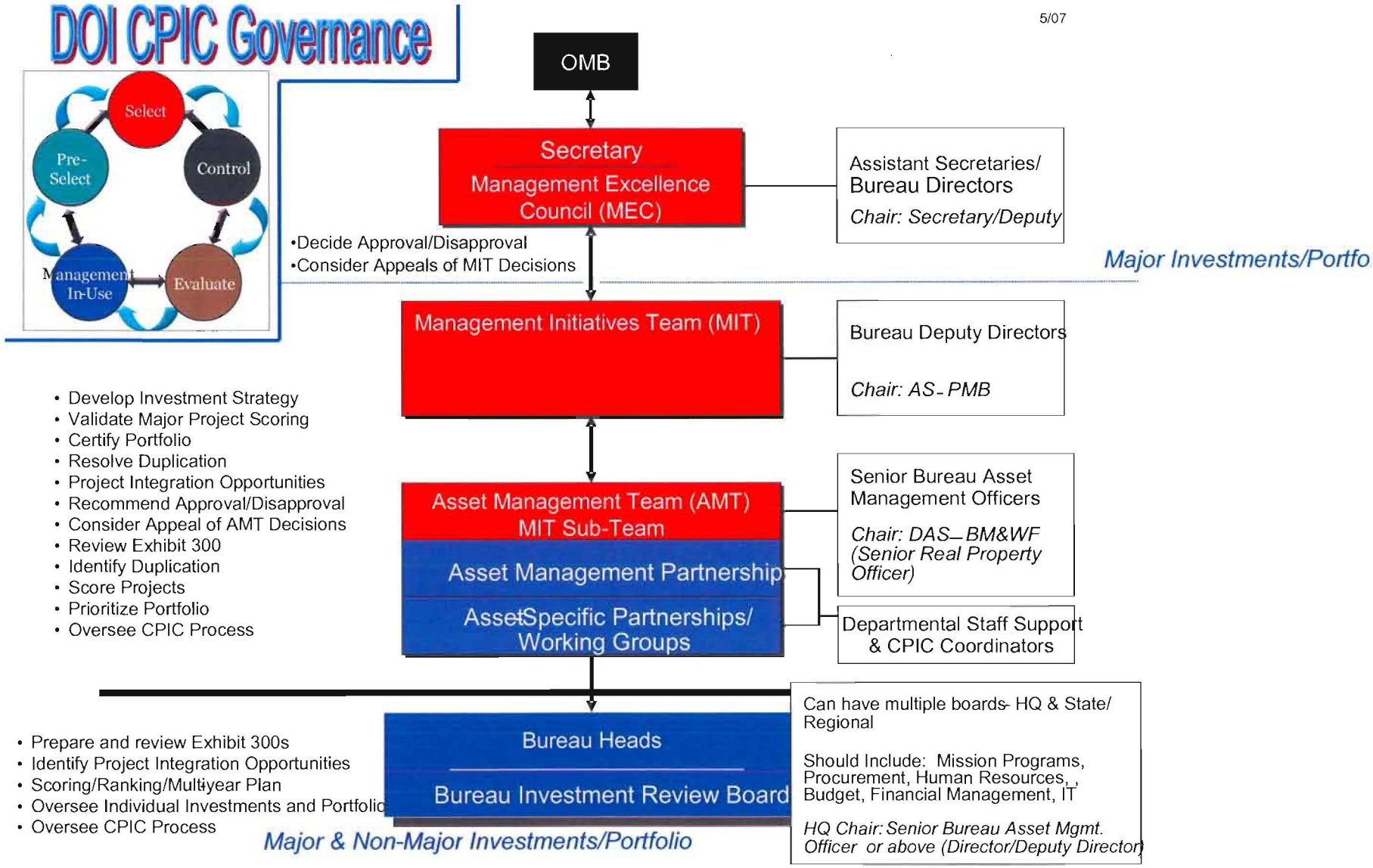
**Bureau Investment Review Boards** is responsible for assessing how well investments address identified business needs as expressed in the Bureau's multi-year plans of construction investments. The Bureau investment review board(s) (IRB) within each bureau, establish criteria that will be used when making investment decisions and approve those investments that best support the Bureau Strategic Plan including major and non-major projects. They are responsible for ensuring the preparation and thorough review of business cases, identifying project integration opportunities, scoring and ranking investments, multi-year planning, and managing bureau investment portfolios and overseeing the bureau's CPIC process.

Membership includes representation from the following areas: mission programs, acquisition, budget, financial management, information management, administration, planning, construction and human resources. The IRB reports to the Bureau Director, Bureau Deputy Director or the Senior Asset Management Officer who approve projects and plans and submits all projects in the multi-year plans to the Departmental Office of Budget and Office of Acquisition and Property Management. They review and approve all major projects as defined in Section 2.4 of this Chapter. The review and approval extends to all new projects and change in baseline and other significant corrective

actions proposed for ongoing projects. Bureau IRB approval is a prerequisite for Departmental review and approval by the AMT of new projects and requests for change in baseline of current ongoing projects.

Supporting the work of the IRB in the management of the bureau's project portfolio is the bureau Capital Planning Staff and critical to managing the individual projects are those committed to project management. Project sponsors with the support of their project managers, integrated project team (ITP) and the bureaus' Capital Planning Staff identify projects for placement in the multi-year construction plan and for consideration by the IRB. The project sponsor, project manager and Capital Planning Staff provide essential information on a continuous basis to the IRB on the status of projects so that the IRB can govern the bureau's portfolio of construction projects.

The roles and responsibilities for these decision-making bodies are detailed in **Appendix A—Board Procedures**. The descriptions of key personnel are described in **Appendix T—Glossary of Terms, Key Positions and Acronyms**.


DOI CPIC Governance
5/07
Select
Control
Evaluate
Management In-Use
Pre-Select
OMB
Secretary
Management Excellence Council (MEC)
Assistant Secretaries/ Bureau Directors
Chair: Secretary/Deputy
•Decide Approval/Disapproval
•Consider Appeals of MIT Decisions
Major Investments/Portfo
Management Initiatives Team (MIT)
Bureau Deputy Directors
Chair: AS-PMB
• Develop Investment Strategy
• Validate Major Project Scoring
• Certify Portfolio
• Resolve Duplication
• Project Integration Opportunities
• Recommend Approval/Disapproval
• Consider Appeal of AMT Decisions
• Review Exhibit 300
• Identify Duplication
• Score Projects
• Prioritize Portfolio
• Oversee CPIC Process
Asset Management Team (AMT) MIT Sub-Team
Asset Management Partnership
Asset-Specific Partnerships/ Working Groups
Senior Bureau Asset Management Officers
Chair: DAS–BM&WF (Senior Real Property Officer)
Departmental Staff Support & CPIC Coordinators
Bureau Heads
Bureau Investment Review Board
Can have multiple boards- HQ & State/ Regional
Should Include: Mission Programs, Procurement, Human Resources, , Budget, Financial Management, IT
HQ Chair: Senior Bureau Asset Mgmt. Officer or above (Director/Deputy Director)
• Prepare and review Exhibit 300s
• Identify Project Integration Opportunities
• Scoring/Ranking/Multiyear Plan
• Oversee Individual Investments and Portfolio
• Oversee CPIC Process
Major & Non-Major Investments/Portfolio

## 2.6 Project Management

Project Management is a crucial element for capital investment success. It involves executing the necessary skills and management practices to ensure successful investment development and implementation. This integrated skill set addresses such areas as project planning, scope management, cost, schedule, performance, risk, and organizational management. Perhaps the greatest project management challenge is identifying risks and then executing management techniques that mitigate the risks to ensure timely and successful project completion.

The Project Sponsor who has authority over the project is responsible for integrating ongoing strategic direction of the project. This strategic direction is given to the project manager and through the project manager to the integrated project team (IPT). The sponsor obtains budget approval for the project, accepts responsibility for problems escalated by the project manager, resolves issues and scope changes, approves major deliverables, signs off on project documents such as the business case, risk management plan and project initiation document, provides high-level direction, and champion the project.

The Project Manager is responsible for the investment's success and ensuring the investment delivers the functionality and capabilities expected by stakeholders (i.e., users, customers, sponsor(s) and senior leaders). Project managers should be given sufficient funding to establish an Integrated Project Team (IPT) to carry out the project charter. To keep the project moving on a tight schedule, management layers between the project manager and senior management should be limited to ensure accountability for the project manager and timely decisions from above.

## 2.7 The Integrated Project Team

A significant component to control and oversight of a project is the Integrated Project Team (IPT). Several disciplines are essential to planning and managing an investment through its life-cycle and the IPT is means for bringing together these disciplines. The IPT will vary in size and acquisition disciplines depending on the phase of the project, but must always contain a qualified project manager and contracting officer. Starting at the initiation of a major project, the team should consist of the individuals with skills in the following areas: Project Management, Contracting, Cost Estimating, Risk Management, Sustainability, Scheduling, Users, Budget, Facility Management, Value Management, and Earned-Value Management. Staff with other appropriate skill sets should also participate in the IPT.

With active participation throughout the life-cycle of a project, the IPT can provide invaluable guidance and input to the project sponsor and project manager to better ensure the project meets budget, schedule and the scope. See the following **Figure 1-4 for a representation of the type of disciplines that comprise an IPT**.

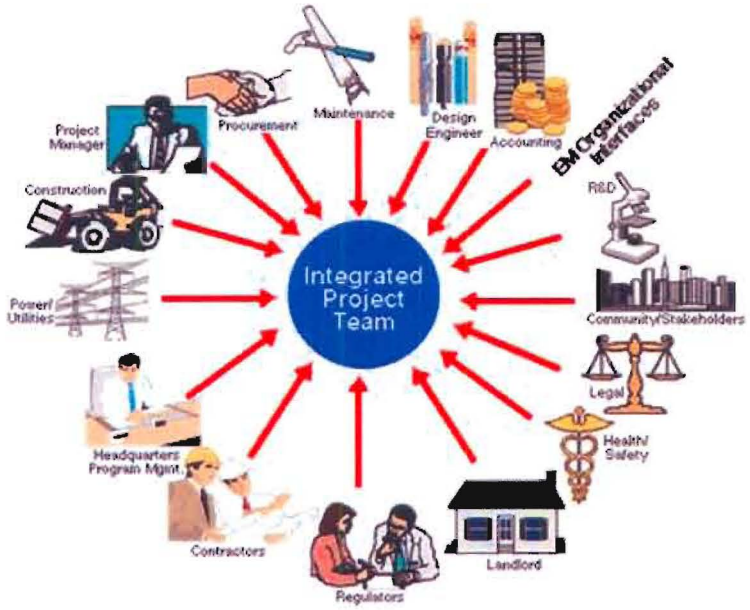



**Figure 1-4. Representation on the Integrated Project Team**

IPTs must devote the planning time needed to create an adequate Work Breakdown Structure (WBS) at project initiation and keep it current throughout the program execution. Project management use of Earned Value Management (EVM) depends on a well-developed WBS to ensure that a program is completely defined. At a minimum, the project manager, in collaboration with experts in the areas of Cost-Estimating, Contracting, Risk Management, Scheduling, and EVM, need to develop a WBS as a common framework within a given program, but also among related programs and across an organization's portfolio. EVM and risk management are management tools established to mitigate risks in developing capital assets. Project must maintain a level of expertise with both these tools that is appropriate to the size and nature of the project.

### 2.8 CPIC Timechart

The DOI CPIC process supports the major budget milestones and procurement activities as outlined in **Figure 1-5—Major Activities in the DOI Fiscal Year Budget Cycle.**

| TIME PERIOD (CURRENT FY) | PROCESS/EVENT | PRODUCTS/DELIVERABLES |
|---|---|---|
| OCTOBER – DECEMBER | • Congress passes appropriations for current year (CY)<br>• (Nov) OMB recommends funding levels for budget year (upcoming in about 11 months) in the pass-back of the President's next budget (CY + 1)<br>• Department and bureaus update capital investment portfolio to reflect current year budget, President's next budget (CY + 1) and strategic plans<br>• Bureaus formulate the pre-select multi-year plans reflecting IT and construction priorities for (CY + 2)<br>• Portfolio and project quarterly control review (1st quarter) is conducted for previous quarter's performance | • Capital investment portfolio is updated<br>• Multi-year Plans are developed<br>• Quarterly report of projects at variance |
| JANUARY – FEBRUARY | • President's Budget (CY + 1) is released<br>• Portfolio and project quarterly control review (2nd quarter) is conducted for previous quarter's performance<br>• Based on AMT recommendations concerning multi-year plans, MIT validates the AMT's approvals of pre-select projects for inclusion in the capital investment portfolio | • Executive CPIC issues FY+2 budget year requirements<br>• Capital investment portfolio is updated<br>• Quarterly report of projects at variance |
| MARCH – MAY | • Bureaus prepare 300s for proposed investments and update current investments for CY + 2 - submit to PMB<br>• Portfolio and project quarterly control review (3rd quarter) is conducted for previous quarter's performance<br>• Portfolio is projected for multi-year planning - Bureaus initiate preparation of Exhibit 53<br>• PMB distributes call for CY+ 2 budget<br>• PMB analyzes CY+ 2 IT and construction budget formulation<br>• Bureaus submit all CY+ 2 budget requests to POB | • Capital investment portfolio is updated<br>• Executive CPIC approves FY+1 and FY+2 portfolio |

| TIME PERIOD (CURRENT FY) | PROCESS/EVENT | PRODUCTS/DELIVERABLES |
|---|---|---|
| JUNE – SEPTEMBER | • Bureaus submit Line-item construction PDS and Five year plan<br>• PAM and POB analyzes CY+ 2 IT and construction budget formulation<br>• Bureaus submit deferred maintenance PDS and 5 year plan<br>• Bureaus complete Exhibit 300s and submit to POB for final review and submittal to OMB for CY + 2<br>• Bureaus submit all CY+ 2 budget requests to PMB<br>• (Aug) Portfolio and project quarterly control review (4th) is conducted for previous quarter's performance<br>• Based on AMT and MIT recommendations MEC approves projects for inclusion in the Department's proposed revised portfolio<br>• Secretary decides on CY + 2 budget request and submits to OMB<br>• Bureaus complete Exhibit 300s and submit to PMB for final review and submittal to OMB for CY + 2<br>• Bureaus and the Department review CPIC process for previous year for lessons learned and best practices for revision of bureau and Department CPIC Guidance | • Capital investment portfolio is updated<br>• The Department submits FY+2 budget to OMB<br>• The Department submits OMB Exhibit 300's to OMB<br>• Revised CPIC Guides |

**Figure 1-5. Major Activities in the DOI Fiscal Year Budget Cycle**

## 2.9 Process Overview

The DOI CPIC process contains five phases (Pre-Select, Select, Control, Evaluate, and Management In-Use[17]). The CPIC process within the bureau and at the Departmental level is a circular flow of DOI's construction investments through the five sequential phases. Chapter 3 of this Guide defines the construction CPIC process.

[17] In the DOI CPIC Guide V1.0, this phase was identified as "Steady-State". Consistent with the Capital Programming Guide, this phase in the updated DOI CPIC Guide is referred to as "Management In-Use".

As detailed in this document, each phase contains the following common elements: (see **Figure 1-4—The Five CPIC Phases and the Common Elements within Each Phase.**)

- Purpose—Describes the objective of the phase;
- Entry Criteria—Describes the phase requirements, and thresholds for entering the phase;
- Process—Describes the type of justification, planning, and review that will occur in the phase; and
- Exit Criteria—Describes the actions that must be successfully completed and the final documentation needed for proceeding to the next phase.

In the management of an investment, completing one phase is necessary before beginning a subsequent phase. In each phase, the Department IRB (Asset Management Team) oversees all major capital construction investments that meet the criteria defined in Section 2.4 of this Chapter and the bureau investment review boards oversee both major and non-major investments. Ultimately, for major projects, the MEC chaired by the Secretary can approve or reject an investment's advancement to the next phase. This ensures that each investment receives the appropriate level of managerial review and that coordination and accountability exist.

**New Proposals**

Bureaus that have new construction investment proposals should prepare an investment proposal/preliminary business case (**see Appendix C—Defining Mission Needs**) and, if approved and dependent on the size of the investment, a detailed business case utilizing the OMB Exhibit 300 (**see Appendix K—Exhibit 300**), according to the guidelines provided in this document.[18]

The bureau IRB evaluates projects for quality and conformance to policies and guidelines. The IRB reviews and scores the projects against the applicable strategic investment criteria (**see Appendix J—Strategic Investment Criteria**). For investments above the threshold described in Section 2.4 of this chapter, the AMT reviews the CPIC Coordinators analysis and scoring of the major investment initiatives and defines a Departmental investment strategy. AMT recommendations are formulated and then prepared and forwarded to the MIT for validation and then on to the MEC for validation and recommendation to the Secretary for approval/disapproval action.

Approval, if granted, is an approval of concept, indicating that the bureau has done the preparatory work necessary to fully justify the investment, and has the mechanisms in place to manage the investment through acquisition (**see Appendix O—Acquisition Strategy**), development, implementation, and operation. The investment must still compete for funding as it goes through the budget process (**see Appendix R—Budgeting for Investments**).

[18] The proposal's length and level of detail should be commensurate with the proposed investment's size or impact.

The CPIC process a fluid, dynamic process in which proposed and ongoing projects are continually monitored throughout their life cycle. Successful investments, as well as those that are terminated or delayed are evaluated both to assess the impact on future proposals and to benefit from any lessons learned (**see Appendix I—Post Implementation Assessments**).

For projects not approved, project sponsors must adhere completely (including re-competing) to the bureau and, as required, the Departmental CPIC process, if and when the proposal is resubmitted for consideration. All investments must appear on a current multi-year investment plan. Bureaus are responsible for carrying out the training and establishing the necessary internal controls to ensure that managers do not authorize capital expenditures from any funds for construction that do not appear on a plan.

These elements provide a consistent and predictable flow and coordination of activities within each phase of a construction capital investment as depicted in the following diagram,

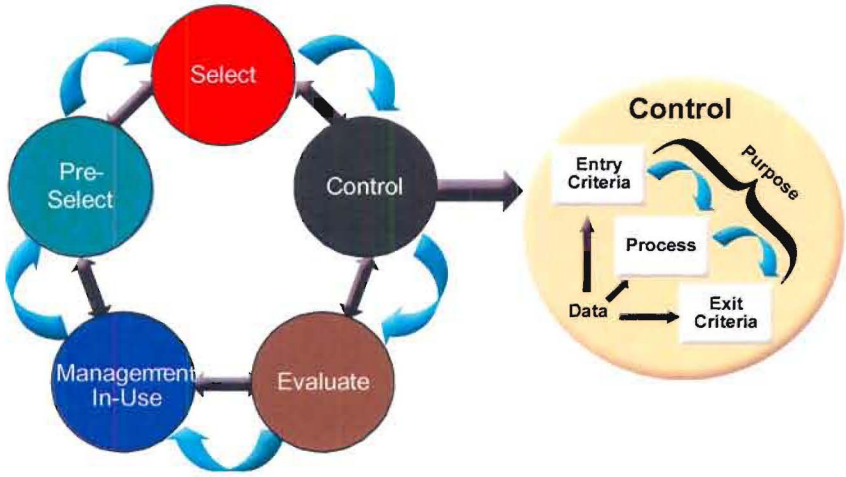



**Figure 1-5. The Five CPIC Phases and the Common Elements within Each Phase**

## 2.10 CPIC Process Future Direction

Adherence and commitment to DOI's CPIC scope, roles and responsibilities and process will enable the CPIC process to mature to ensure that each investment supports the mission and is effectively managed. As DOI implementation of the CPIC process matures, DOI will strive to be able to integrate portfolios across the Department creating a capital planning process that allows for trade-offs among all types of capital constructed assets. Using tools such as the Federal Real Property Council's Federal Real Property Profile and the Performance Assessment Tools, capital assets will be compared against one another to create a prioritized portfolio of all assets. DOI will choose and actively manage a portfolio of capital investments that maximizes return to the taxpayer and Government at an acceptable level of risk.

## 2.11 Appendices

The Appendices provide guidance on preparing a business case (OMB Exhibit 300) and establishing and sustaining a capital planning and investment control program.

A. Board Procedures—Provides the detailed roles and responsibilities of review and decision-making bodies (Updated in 6/07).

B. CPIC Process Checklist—Provides a checklist of the process steps investments must complete for each CPIC phase (Updated in 6/07).

C. Defining Mission Needs—Provides a template for evaluating the mission need(s) for a new Construction investment (Updated in 6/07).

D. Benefit-Cost Analysis—Provides guidance on completing a Benefit-Cost Analysis (BCA)

E. Risk Assessment—Provides guidance on conducting a risk assessment for construction capital planning.

F. Performance Measurement—Provides guidance on developing performance measures for Construction investments.

G. Project Management—Provides guidance on managing investments.

H. Earned Value Analysis—Provides guidance on conducting earned value analysis.

I. Post Implementation Assessments—Provides guidance on conducting a Post-Occupancy Evaluations for construction.

J. Strategic Investment Criteria—Provides the scoring criteria used by the bureau investment review boards, the AMT, the MIT and the MEC during the annual investment review.

K. OMB Exhibit 300—This is the basic format for submitting the investment package.

L. eCPIC Requirements by Phase—Provides a summary of the data required in the Investment Portfolio System (eCPIC) for each CPIC phase.

M. Quarterly/Milestone Control Review Checklist—Lists the critical areas the Control Review Team discusses during each Quarterly/Milestone Review.

N. CPIC Process Assessment—The criteria to be used to certify the bureaus' CPIC processes for evaluating and managing major and other capital investments.

O. Acquisition Strategy—Provides guidance on developing an investment's acquisition strategy.

P. Department's Planning Structure—Presents an overview of, and links to, the President's Management Agenda and the Department's Strategic Plan and annual performance plan, which establish the basic framework to be supported by all Department investments.

Q. Value Engineering—Provides guidance on using value engineering design.

R. Budgeting for Capital Investments Planning and Investment—Provides guidance on estimating and entering capital asset investment budget data into Exhibits 300 for the Department as well as in preparing the budget request for investment funds.

S. Portfolio Management — Provides guidance on a critical business process that ensures that an optimal capital investment portfolio with manageable risk and returns is selected and funded.

T. Glossary of Key Terms and Acronyms — Provides definitions for terms and acronyms used throughout this document.

U. References—Provides a list of references used to develop this document.

# CHAPTER 3—CPIC PROCESS BY PHASE

This Chapter defines the construction CPIC process applied to major projects and presents the governance roles and responsibilities according to the five CPIC phases. The bureaus' CPIC programs applied to major project and other construction investments must conform with the governance process defined in this Chapter. The attention and effort in the governance of assets must be scaled to the project costs and impact to the mission.

The five CPIC phases discussed in the Chapter are:

- **Pre-Select Phase**—Senior bureau decision-makers assess each proposed investment's support of DOI's strategic and mission goals and incorporates it into a multi-year investment plan. Project stakeholders compile the information necessary for developing a preliminary business case supporting multi-year plans. Individual project proposals are assessed, prioritized and identified as a major project (meeting the prescribed thresholds defined in this guide) in a multi-year plan by each bureau's and the Department's IRBs.
- **Select Phase**— Bureaus prepare comprehensive business and investment analyses for proposed construction investments that are thoroughly reviewed within the bureau. Bureau and Department IRBs review and approve the major construction projects[19] that best support the mission of the organization, strategic plans, and support DOI's approach to enterprise architecture. Approved investments are entered in the budget process or alternative funding sources are identified.
- **Control Phase**— DOI and its bureaus ensure, through timely oversight, quality control, and executive review, that construction initiatives are executed and managed in a disciplined and consistent manner and are meeting cost, schedule, scope, and performance goals. Earned Value Management Systems must be in place to track a project's progress and serve as an early warning indicator of possible challenges ahead. Well-defined Corrective Action Plans are required for investments that exceed pre-set variances for cost, schedule, and performance goals. A change in the established and approved project baseline is always the last corrective action to be considered to address project variances.
- **Evaluate Phase**— Actual results of the implemented projects are compared to performance goals to assess investment performance. This is done to assess the project's contribution to carrying out DOI and bureau missions and identify any project changes or modifications that may be needed. In this phase, construction projects move from implementation or termination to warranty and maintenance.
- **Management In-Use Phase**[20]— All capital investments are assessed to ascertain their continued effectiveness in supporting mission requirements, evaluate the cost of

[19] The threshold for major construction projects is found in Section 2.4 of this chapter.

[20] In the DOI Information Technology (IT) and Construction Capital Planning and Investment Control Guide V1.0, this phase was identified as the Steady-State phase. For construction investments, this phase is also referred to as "Facility Maintenance."

continued maintenance, assess potential life cycle improvement opportunities, and consider disposition and/or replacement options.

## SECTION 3.1—PRE-SELECT PHASE

### 3.1.1 Purpose

The Pre-Select Phase provides a process to:

- Assess a construction investment's support of both Bureau and Departmental strategic and mission needs. Regardless of size and funding source, the project sponsor will link proposed construction projects to the Bureau and Departmental mission and strategic plan goals and objectives.
- Provide initial analysis to further support construction investments.

Senior bureau and office decision-makers assess each proposed investment's support of DOI's strategic and mission goals and incorporate it into the Five-Year Deferred Maintenance and Capital Improvement Plan. Project stakeholders compile the information necessary for developing preliminary business case supporting multi-year plans. Individual project proposals (Project Data Sheets) are assessed and prioritized in the Five-Year Plan.

During this phase the business/mission need is identified and relationships to the Department and Bureau strategic planning efforts are established. There are significant information requirements and a potential expenditure of funds in the preliminary planning phase to prepare for review and selection of investments. This planning phase drives the remaining phases in the capital asset's life-cycle. The project acquisition life-cycle starts with concept analysis, progressing through technology definition, requirements planning, acquisition and finally through operations and maintenance.

The Pre-Select Phase provides an opportunity to focus efforts and further the development of the proposed construction project. Program managers begin the process of defining business requirements, performance measures, benefits, and costs, as well as subsequent completion of a business case and project planning efforts in preparation for inclusion in the Department's construction investment portfolio.

### 3.1.2 Entry Criteria

Prior to entering the Pre-Select Phase, the construction project must have a concept that supports the Bureau and Department mission needs.

### 3.1.3 Process

During the Pre-Select Phase, all proposed projects would have a construction project needs assessment to identify related mission goals that drive decision considerations for construction project alternatives. The needs assessment and the subsequent Project Data Sheet (see **Appendix C—Defining Mission Needs**) are linked to the strategic planning

process of the Department and sponsoring Bureaus. The Program Manager/Program Sponsor develops the Project Data Sheet:

- Project Description
- Project Score
- Project Justification
- Project Cost and Status

**Table 3.1-1** provides a summary of the Pre-Select Phase process, as well as the individual(s) and/or group(s) responsible for completing each process step. Each step is detailed following the table.

| No. | Process Steps | Responsible Individual(s) or Group(s) |
|---|---|---|
| 1 | Identify Project Sponsor | Bureau Head |
| 2 | Needs Assessment and Project Data Sheets | Project Sponsor |
| 3 | Evaluate & Rank Proposed Projects Requests | Bureau Capital Assessment Team (support staff to the Bureau Investment Review Board) |
| 4 | Prepare Draft 5-Year Plan | Capital Planning Staff |
| 5 | Evaluate Draft 5-Year Plans; Revise, Prepare Final 5-Year Plan | Capital Planning Staff |
| 6 | Review/approve Bureau 5-Year Plan | Bureau Investment Review Board/ Bureau Head |
| 7 | Review initiatives and recommend appropriate action and make pre-select investment decisions/approve DOI 5-Year Plan. | Asset Management Team |

**Table 3.1-1 Pre-Select Phase Process Steps**

***1. Identify Project Sponsor***

The Bureau Head identifies a Project Sponsor for each accepted project.

- The Project Sponsor should be a senior individual in the organization with requisite management, technical, and business skills to lead the capital asset investment and work with Project Manager.

- The Project Sponsor is accountable to the Bureau Head and the Bureau Investment Review Board (IRB) for the investment as it continues through the CPIC process.

***2. Needs Assessment and Project Data Sheet***

The needs assessment is a forward-looking project planning effort that enables the Bureau's IRB to determine and prioritize the most critical capital investments that will be considered in the development of DOI's construction project portfolio.

- Needs assessment is conducted within the framework of both the Department's and the sponsoring Bureau's long-range strategic goals
- If the needs assessment reveals a non-Construction solution (e.g., a rulemaking/policy change, operational procedural change, leasing, or contract for services) that can satisfy a capability shortfall and can be achieved within approved budgets, it should be implemented without proceeding further in the CPIC process.
- Needs assessment will identify the business drivers (i.e. Bureau mission, vision, goals, objectives, and strategic plans.)
- The Project Data Sheet is prepared from the supporting documentation in the needs assessment.

The principal activities of needs assessment are:

- Identify and quantify projected demand for services based on input from diverse sources such as the National Park visitors and tribal governments.
- Identify and quantify construction projects that will enable the Department.
- Bureau to perform their missions more efficiently and effectively.
- Identify and quantify existing and projected services based on information from field organizations, such as asset inventory, and Facilities Condition Assessment Survey (FCAS).
- Identify, analyze, and quantify capability shortfalls (i.e., the difference between demand and supply) in construction needs.
- Identify the user and customer base.
- Examples of potentially valid needs that could originate outside DOI lines of business include those related to socioeconomic and demographic trends, the environment, statutory requirements, or an industry-developed technological opportunity and Congressional budget add-ons.
- Assess the criticality and timeframe of the proposed construction project, and roughly estimate the resources the Bureau should commit to accomplishing it based on best value, and criticality.

***3. Evaluation and Rank Proposed Project Requests***

Evaluating and ranking construction projects is the method for further examination of a proposed solution. The proposed projects are evaluated and ranked from the information provided in the Project Data Sheet. The project evaluation focuses on an analysis of alternatives to meet the mission need and initial planning for entering into the Select Phase.

The following activities are conducted during evaluation and ranking:

- Prepare Needs Assessment in which the proposed investment is discussed in relation to the following OMB's "Three Critical Questions."
  - **Does the investment in major capital asset support core/priority mission functions that need to be performed by the Federal Government?**
  - **Does it have to be undertaken by the requesting Bureau because no alternative private sector or government source can more efficiently support the function?**
  - **Does the investment support work processes that have been simplified or otherwise redesigned to reduce costs, and improve effectiveness?**
- Identify high-level performance measures. (Lower level detailed performance measures will be developed as part of the Select Phase.)
- Identify alternatives that will be analyzed to support mission need and business objectives.
- Develop a Project Data Sheet for each construction project in the 5-Year Deferred Maintenance and Capital Improvement Plan (5 Year Plan).
- Review Projects, as applicable, against existing DOI and Bureau priority lists, such as the DOI Dam Safety Technical Priority Rating List and the Seismic Safety Rehabilitation Priority List.

### *4. Prepare Draft 5-Year Plan*

The Five-Year Deferred Maintenance and Capital Improvement Plan provides the necessary information to support a Bureau's proposed construction project portfolio. While the primary emphasis of the Pre-Select Phase is on mission and strategic needs, it also requires the Program Manager/Project Sponsor to begin identifying alternative solutions and developing an estimate of costs and benefits (both quantitative and qualitative) that will be realized by the capital construction projects. The 5-Year Plan outlines the entire set of projects for each fiscal year and identifies for each project a preliminary budget estimate, project score, and project composition based on the established 5-Year Plan ranking categories.

**Prepare preliminary budget estimate**—The preliminary budget estimate should provide an estimate of costs necessary to support more detailed planning and concept development prior to investment selection, and provide an estimate of budget requirements to support a five-year budget plan and lifecycle costing. If appropriate, full project funding should be requested.

### *5. Evaluate Draft 5-Year Plan; Revise Projects for Final 5-Year Plan*

Capital Planning Staff working with Program Managers/Project Sponsors prepares the draft 5-Year Plan package in preparation for the Department's annual capital asset pre-select investment review. The 5-Year Plan includes:

- Project Data Sheets
- Annual updating of proposed projects
- Evaluation and Ranking Construction Project Report
- Projects recommended for the Five-Year Plan

The format for submitting the proposed construction project package summary is the Project Data Sheet found in **Appendix C—Defining Mission Needs**

***6. Review/Approve 5-Year Plan***

- The Bureau Investment Review Board reviews the projects to be put in the 5-Year Plan and makes recommendations to the Bureau Head.
- The Bureau Head approves or disapproves recommendations and if need be ask for the Plan to be revised.

The Bureau Head will forward proposed projects to be in the 5-Year Plan to the Departmental Office of Budget (POB) and Office of Acquisition and Property Management (PAM).

***7. Review Initiative and Recommend***

Appropriate Action and Makes Pre-select Investment Decisions

POB and PAM will analyze the bureau 5 Year Plans as part of CPIC investment portfolio management. The two offices review the Plans to identify potential opportunities to consolidate similar investments into a larger , more effective investment. They jointly compile the bureau plans into a DOI Plan, and summarize and report on the Plan to the Asset Management Team (AMT). The AMT reviews and makes pre-select investment decisions through approval of the Department's 5 Year Plan.

### 3.1.4 Exit Criteria

Prior to exiting the Pre-Select Phase, construction projects investments in the 5 Year Plan must obtain AMT approval for meeting the mission's need and complying with the Pre-Selection process. Project approval is a green light for the project sponsor to develop a comprehensive business case (Exhibit 300) to be used for the project selection phase for all major projects that meet or exceed the thresholds in Section 2.4 of Chapter 2 of this Guide.

## SECTION 3.2—SELECT PHASE

### 3.2.1 Purpose

In the Select Phase, DOI utilizes a structured review and evaluation process that ensures that the selected construction investments fully support the mission and strategy of the Department. Individual investments are evaluated in terms of technical merit and program enhancement as measured by cost, schedule, benefit, and risk. Milestones and completion schedules are also established for each investment during the Select Phase.

In this phase, the Bureau Investment Review Boards (IRB) reviews and approves the business case (Exhibit 300) for each major project in which the total cost for planning, design and construction meets or exceeds $2 million. The Office of Acquisition and Property Management (PAM) as staff support for the Asset Management Team (AMT) receives the business cases for projects over $10 million or meeting the thresholds in Section 2.4 of Chapter 2 of this Guide. The PAM-led DOI inter-bureau CPIC Coordinators review the Exhibit 300, scores each project and develops comments and recommendations based on the contents and quality of the business case. Investment submissions are assessed against a uniform set of evaluation criteria.

The investment's business case is systematically scored using objective criteria and the investment is ranked and compared to other investments. The AMT evaluates recommendations of the CPIC Coordinators and, as the DOI construction IRB, decides whether the project should proceed as part of the DOI investment portfolio of current and proposed major investments.

The AMT forwards their findings and recommendations to the MIT. The MIT evaluates and validates the AMT recommendations proposed for the construction projects. The MIT submits recommendations to the MEC who in turn reviews and validates the MIT's recommendations and forward with comment, as applicable, to the Secretary for final budget decision consideration

### 3.2.2 Entry-Criteria

Prior to entering the Select Phase, investments must be included in the DOI approved 5-Year Plan.

### 3.2.3 Process

The Select Phase begins with an investment concept (approved during the Pre-Select Phase) and moves through the development of the business case including acquisition plan, risk analysis, performance measures, budget and a project schedule. These plans lay a foundation for success in subsequent phases. The Select Phase culminates in a decision whether to proceed with the investment.

**Table 3.2-1** provides a summary of the Select Phase process as well as the individual(s) responsible for completing each process step. Each step is detailed following the table.

| No. | Process Step | Responsible Individual(s) or Group(s) |
|---|---|---|
| 1 | Develop Integrated Project Team (IPT) and validate project scope | Project Sponsor |
| 2 | Identify and Secure Project Development Funding | Program Sponsor |
| 3 | Initiate Project Development | Project Sponsor |
| 4 | Finalize Capital Asset Plan & Justification (CAP) | Project Sponsor |
| 5 | Review and Approve CAP | Bureau Head/Bureau Investment Review Board |
| 6 | Review Bureau CAP and Scope/ Recommend Appropriate Action | AMT and MIT |
| 7 | Review & Validate Project Recommendation | MEC |
| 8 | Approve Bureau CAP and Submit to OMB | Secretary |

**Table 3.2-1 Select Phase Process Flow**

***1. Develop Integrated Project Team and Validate Project Scope***

The Project Sponsor reviews the project data sheet submitted for the Five-Year plan and other documentation completed during the Pre-Select Phase and makes any necessary changes. The Project Manager then develops quantifiable project outcomes with appropriate performance measures that focus on outcomes and public health and safety whenever possible. These performance measures will form a basis for judging construction success and user satisfaction.

The Project Manager coordinates the selection of the Integrated Project team (IPT) members that will assist in the initiative's development with concurrence from the Program Manager. The IPT brings together expertise from functional areas as required by the specifics of the initiative. The IPT normally involve functional experts in the following areas:

- Bureau Budget Analyst
- Procurement/Contracting Specialist
- Project Manager who has formal project management training
- Technical Specialist with experience in relevant engineering and design requirements
- Program or Facility Specialist

It is important that the IPT consist of individuals with skills in the following areas: Project Management, Contracting, Cost Estimating, Risk Management, Sustainability, Scheduling, Users, Budget, Facility Management, Value Management, and Earned-Value Management. Additional staff may be added from other functional areas as needed. Serving on the IPT will normally be an additional duty but initiative size or potential impact may increase commitment.

### *2. Identify and Secure Project Development*

The Project Sponsor with support from the budget analyst will identify the funding source for support of the project during development. The Program Sponsor will then get approval from the appropriate Bureau management, as needed, depending upon the projects characteristics. The members of the IPT should assist in coordinating these actions within their respective functional areas.

### *3. Initiate Project Development*

The Project Manager ensures, that for each investment, the following studies are completed and the results are submitted to the Project Sponsor.

- Business Profile:
  - Business Case with Performance Measures (see **Appendix F—Performance Measurement**) and mission needs statement
  - Functional Requirements
  - Risk Assessment
- Financial Profile:
  - Update project cost projections
  - Develop Alternatives
- Management and Planning Profile:
  - Project Plan, including a list of team members
  - Acquisition Plan and strategy

### *4. Finalize Capital Asset Plan and Justification*

For those approved projects that meet the threshold levels (defined in Section 2.4 of Chapter 2) or are of special interest to DOI and/or OMB, a detailed Exhibit 300 business case is prepared by the Project Sponsor for submission to the Bureau Investment Review Board for review and approval. For those projects that are below the threshold level (i.e., under $2 million), yet are significant projects, it is strongly encouraged that a detailed business case be completed and utilized by the Bureau to manage these projects with the same level selection and control as the threshold projects.

The format for submitting the business case is the revised OMB Exhibit 300 for Construction projects found in **Appendix K—OMB Exhibit 300**. The Bureau Sponsor submits the Exhibit 300 and their accompanying 5-Year Plan Project Data Sheet for review by the Bureau Investment Review Board. The Exhibit 300 also needs the concurrence of the bureau contracting officer and budget officer.

The elements of an Exhibit 300 (such as performance goals, risk management, alternative analysis, costs and schedules including work breakdown structures) are the fundamental requirements for successful project management and decision-making. These elements should be found in a project's existing documentation and should not need to be developed to simply address the requirements of the Exhibit 300.

Other supporting investment documentation needed to evaluate other key areas are located in Appendix of this document and should be attached, as needed, to OMB Exhibit 300. Supporting documentation to include:

- Introduction and brief overview of the investment;
- Project Data Sheet (Mission Needs Statement) **(See Appendix C—Defining Mission Needs)**;
- Acquisition strategy Statement **(See Appendix O—Acquisition Strategy)**;
- Initial project plan with estimated costs listed for each work breakdown structure (WBS);
- Performance goals;
- Architecture and facility design, including accessibility for persons with disabilities;
- Bureau ranking and priority;
- Alternative Analysis, including LCC, ROI and Value Engineering analysis* Statement **(See Appendix D— Benefit Cost Analysis and Appendix Q—Value Engineering)**
- Risk Assessment and mitigation plans Statement **(See Appendix E—Risk Management)**

* Various types and levels of analyses may not be applicable at the time of the initial Exhibit 300 submission

### *5. Review/Approve Capital Asset Plan*

The Bureau IRB reviews the project submission and requests the Project Sponsor and/or Project Manager to update the package or make changes as needed, including review and certification of the project budget/costs by the Chief Financial Officer. The Bureau Head then approves the investment submission and forwards the Business Cases for the major projects to the Directors of the Office of Acquisition and Property Management (PAM) and the Office of Budget (POB) for entry into the Department's CPIC governance process The current 5-Year Plan, Project Data Sheet for the project is also submitted to PAM and POB.

### *6. Review Bureau CAP and Scope and Recommend Appropriate Action*

PAM and POB receive the approved business case for major projects from the Bureau Head and the PAM-led inter-bureau CPIC Coordinators conducts a review and scoring of each project and develops comments and recommendations based on the contents and quality of the business case contained in the Exhibit 300. Investment submissions are assessed against a uniform set of evaluation criteria. The investment's business case is systematically scored using objective criteria and the investment is ranked and compared to other investments.

The AMT, as the Department's construction IRB, reviews the scoring and recommendations of the CPIC Coordinators and makes decisions on whether the project proceeds. The AMT recommends new major construction investments and reviews and makes recommendations to the MIT on approved projects that are in the CPIC control and the evaluate phases. The AMT forwards their findings and recommendations for review and to be validated by the MIT.

***7. Review & Validate Project Recommendations***

The MIT validates the AMT's decisions. The MIT then forwards their investment recommendations to the MEC for validation of recommendations and approval.

The MEC reviews the recommendation and recommends approval, disapproval or other actions to the Secretary who makes the final investment decisions. The Executive CPIC establishes in concert with the MIT, the implementation and review schedule for the Control Phase. The project initiative then moves to the Control Phase.

***8. Approve Bureau CAP and Submit to***

The Secretary has the final decision responsibility to approve and submit projects to OMB as part of the Department of the Interior's budget.

### 3.2.4 Exit Criteria

Prior to exiting the Select Phase, investments must have an Approved business case (Exhibit 300) with:

- Performance goals and quantifiable performance measures;
- A project plan which details quantifiable objectives including an acquisition schedule, project deliverables, and projected and actual costs;
- Project costs, schedule, benefits, and risks;
- Investment review schedule for the Control Phase; and
- AMT, MIT, MEC and Secretarial approval to enter the Control Phase.

## SECTION 3—CONTROL PHASE

### 3.3.1 Purpose

The objective of the Control Phase is to ensure, through timely oversight, quality control, and executive review, that capital investments are conducted (designed and constructed) in a disciplined, well-managed, and consistent manner. Investments should be closely tracked against the various components identified in the Risk Management Plan and Risk Response Plan developed in the Select Phase (see Chapter 3, Section 3.2.3). This phase also promotes the delivery of quality products and results in capital investments that are completed within scope, on time, and within budget. During this process, senior managers regularly monitor the progress/performance of ongoing capital investments projects against projected cost, schedule, performance, scope and delivered benefits.

Although DOI usually selects new investments annually, the Control Phase is an ongoing activity. It requires the continuous monitoring of ongoing capital investment projects through the design and construction or acquisition lifecycle. DOI reviews occur before the annual budget preparation process. Additionally, quarterly summary reviews and variance reports are completed on updated capital asset plan submissions.

The Control Phase is characterized by decisions to continue, modify, or terminate a project. Decisions are based on reviews at key milestones during the project's design and construction lifecycle. The reviews focus on ensuring that projected benefits are being realized; cost, schedule and performance goals are being met; risks are minimized and managed; and the investment continues to meet strategic needs. Depending on the review's outcome, decisions may be made to suspend funding or make future funding releases conditional on corrective actions.

### 3.3.2 Entry Criteria

Prior to entering the Control Phase, investments must have:

- Obtained funding to begin capital construction investment process.
- Established performance goals and quantifiable performance measures;
- Developed a project plan which details quantifiable objectives, including an acquisition/outlay schedule, project deliverables/milestones, and projected and actual costs; and
- Identified costs, schedule, benefits, and risks.

Once the investment enters the Control Phase, the project sponsor/manager is responsible for the project performance and execution. The Bureau Head and the Bureau Investment Review Board (IRB) will monitor the project throughout design and construction and report investment status to the Asset Management Team (AMT).

### 3.3.3 Process

During the Control Phase, an investment progresses from planning and design to construction. Throughout this phase, the project sponsor and project manager provide the

Bureau IRB with project reviews to assist them in monitoring all investments in the portfolio. Project reviews provide an opportunity for Program Managers to raise issues concerning the capital construction investment, including risk management, safety, value engineering change proposals, contract modifications, inspection management, budget, schedule and scope variances, etc., to the Project Sponsor for appropriate action. Such action may involve the Bureau IRB and the Asset Management Team if the project is at variance or a request to OMB for a change in baseline will be sought.

The ability to adequately monitor major construction projects relies heavily on the outputs from effective project execution and management activities. The Project Sponsor and Project Manager, in coordination with the Capital Planning Staff, develop a master milestone review calendar for evaluation and approval by the Bureau IRB and the Bureau Head. The AMT, with the support of the Office of Acquisition and Property Management (PAM) and the Office of Budget (POB), and in consultation with the MIT, maintains a control review schedule for all projects in the Department's capital construction investment portfolio and monitors investments quarterly.

**Appendix M—Quarterly/Milestone Control Review Checklist** provides an outline of the items Bureaus must address in writing for each quarterly or milestone control review. The AMT, through the PAM and POB, is notified for possible action, if an investment's cost, schedule, or performance varies more than 5 percent from expectations. Any project variances greater than 10 percent must be reported to OMB as required in OMB Circular A-11.

The AMT reviews are based on factors including the strategic alignment, criticality, scope, cost, and risk associated with all capital construction investments. The Project Sponsor establishes milestones as part of the investment baseline against which performance will be measured throughout the Control Phase. Bureaus are expected to uphold these milestones; OMB will hold agencies responsible for meeting milestones as originally indicated in the baseline.

Earned Value Management Systems must be in place to track a project's progress and serve as an early warning indicator of possible challenges ahead. Well-defined Corrective Action Plans are required for investments that exceed pre-set variances for cost, schedule, and performance goals. A change in the established and approved project baseline is always the last corrective action to be considered to address project variances.

**Table 3.3-1**—provides a summary of the Control Phase process, as well as the individual(s) and/or group(s) responsible for completing each process step. Each step is detailed following the table.

| No. | Process Step | Responsible Individual(s) or Group(s) |
|---|---|---|
| 1 | Develop project assessment procedures and operating principles. | Project Sponsor |
| 2 | Assess project performance against OMB-approved business case baselines. | Project Sponsor |
| 3 | Prepare and submit quarterly progress reports | Project Manager |
| 4 | Review and approve progress reports | Bureau Investment Review Board and Bureau Head |
| 5 | Review Bureau progress reports and recommend appropriate action | Office of Acquisition and Property Management (PAM) and Office of Budget (POB) |
| 6 | Review and evaluate<br>(Projects with variance issues) | AMT |
| 7 | Approve Bureau corrective action plans | AMT |
| 8 | Submit completion CAP to OMB<br>(Project close out) | POB |

**Table 3.3-1 Control Phase Process Flow**

***1. Develop project assessment procedures and operating principles.***
The Project Sponsor and Project Manager establish the project management and executive plans, procedures, and practices to support project-monitoring activities. The Project Sponsor ensures that the investment still aligns with the Interior/bureau/program mission and the DOI Strategic Plan. The Project Sponsor ensures that the project has been planned realistically. Project cost, schedule and performance baselines provide both the framework and sufficient detail to assess the status of the project's established major milestones, work units and deliverables.

***2. Assess Project Performance Against Approved Baselines.***
The Project Sponsor, with the aid of the Project Manager, collects actual information on the resources allocated and expended throughout the Control Phase. The Project Sponsor compares the actual information collected to the estimated baselines developed during the Select Phase and identifies root causes for any differences. The Project Sponsor also maintains a record of any changes to the project's baselines when they occur and are

approved by the Secretary. Periodic predictive estimates are done on project final cost and schedule, based on actual cost and schedule performance versus planned baselines. Earned value is calculated quarterly for all project cost and schedule components.

***3. Prepare and Submit Quarterly Progress Reports.***
The Program Manager prepares and submits quarterly progress reports to the Bureau IRB, providing status on actual costs, schedule, and performance against established project baselines. An earned value analysis is preformed for project cost and schedule.

***4. Review and Approve Progress Reports***
As part of the periodic milestone reviews during the Control Phase, the Bureau Head and Bureau IRB review the progress reports before they are submitted to the AMT through PAM and POB. The Bureau Head and Bureau IRB are not required to initiate actions on projects, which have less than 5 percent variance from their original baselines for cost, schedule, or performance measures. On projects that have a 5 percent or greater variance, the Bureau IRB reviews the Corrective Action Plans and the Bureau Head, based on the investment review board's recommendation will approve or disapprove the proposed mitigation measures and proposed corrective actions. The primary purpose of this assessment is to ensure the initiative is on schedule and to help identify issues or deficiencies that require corrective action. In some instances, where the business case may no longer exist or be as strong, or if significant changes to the cost, schedule, and technical baselines are required, it may also be necessary to terminate the project. The quarterly updated progress reports are submitted by the Bureau Head to the Senior Real Property Officer as the Chair of the Asset Management Team.

***5. Review Bureau Progress Business Cases and Recommend Appropriate Action***
Each investment in the Control Phase will be evaluated during the quarterly investment review. The format for submitting the quarterly Investment Package found in **Appendix M—Quarterly/Milestone Control Review Checklist**. A full and complete Exhibit 300 is required at least twice a year in September and April and when changes in the following areas occur during acquisition and construction:

- Introduction and brief overview of the investment;
- Cost vs. baseline;
- Schedule vs. baseline;
- Performance vs. baseline;
- Validated/updated Cost Benefit Analysis; and
- Risk Management.

Other supporting investment documentation to evaluate other key areas are located in this Section and the Appendix Section of this document and should be attached, as needed, to the Exhibit 300

Note that projects that provide insufficient performance measure documentation could be subject to reduced or delayed project funding.

The AMT, through the analysis of PAM and POB, assesses the major projects progress based on the earned value analysis, size and type of variances, project performance measures, and proposed detailed corrective action(s) by the Bureau to mitigate or eliminate project variances. The Project Sponsor and Project Manager work with their bureau's Capital Planning Staff to address the issues and furnish details as requested. The bureau Capital Planning Staff in turn works with PAM and POB to address concerns. PAM and POB assesses whether the investment is still feasible (i.e., is it still meeting its performance requirements?). Have performance gaps been identified and tracked, and has a mitigation plan been initiated to overcome the gaps?)

Woking collaboratively, the two Departmental offices forwards the updated Exhibit 300 Investment Package, along with its assessment, to the AMT for review.

***6. Review and Evaluate Project Recommendation (Projects with Variance Issues)***

For projects with a budget and schedule variance equal to or greater than +5 percent or -5 percent or that have revised the project scope, the Project Sponsor and Project Manager must alert the Bureau IRB of variance and actions to bring the project back to within acceptable variance. If the project has a budget and schedule variance equal to or greater than +10 percent or -10 percent or that have revised the project scope, the project sponsor and project manager through the Chair of the Bureau IRB must notify the AMT through PAM and POB. The AMT must be advised of actions to bring the project back to within acceptable variance on a quarterly basis as long as the project is at a significance variance.

If the variance cannot be brought back into to within an acceptable variance through actions by the project manager or project sponsor, then the Chair of the Bureau IRB, as a last resort, must formally request to the Senior Real Property Officer as the Chair of the AMT for a change in baseline for full AMT consideration and concurrence and OMB approval. A request for a change in baseline must have the concurrence of the Project Sponsor, Bureau Budget Officer, Bureau Procurement Officer and the Bureau IRB.

The AMT reviews the recommendations of PAM and POB concerning a request for change in baseline and determines whether there is still a business case to continue the capital construction investment and whether mitigation actions including a change in baseline is appropriate and warranted. For each ongoing that is reviewed by the AMT, a determination is made to approve, approve with conditions, or reject the PAM and POB recommendations. Dependent on the significance of the major project, the AMT determinations are forwarded to the MIT and then on to the MEC for validation and concurrence and finally on to Secretary for approval or disapproval.

***7. Approve Bureau Business Case or a Change in Baseline Request***

The MIT validates AMT recommendations on a new business case or request for a change in baseline. Dependent on the significance of the major project, the MEC and then the Secretary can review the determinations of the AMT. In those cases, the Secretary then accepts or rejects the AMT determinations and forwards a decision to the Bureau through the AMT. The Project Sponsor/Project Manager prepare an updated Exhibit 300 if baseline

changes will need to occur. If the revised business case with newly approved baseline is conditionally approved by the AMT, the Project Sponsor/Project Manager is requested by the AMT to modify/update the package, make changes as needed, and resubmit to PAM and POB.

If the Business Case is approved as submitted, the Bureau will work closely with the AMT, through PAM and POB to develop plans and solutions to eliminate, mitigate or manage identified project risks (e.g., financial, acquisition and technical). If the approved Business Case results in an approved change in the baseline(s), then an updated, revised Exhibit 300 will be prepared to submittal to OMB for consideration.

OMB can approve or deny the request. In the event that a request has not received feedback form OMB after thirty days from the date the request was made, the project sponsor/project manager can revise the baseline in the project's business case.

***8. Prepare and Submit Completion Business Case***

Upon completion of the capital construction project, a final completion Business Case is prepared and submitted as part of the quarterly updates schedule. The Bureau Head and Bureau IRB verify that the project is fully completed and a final Business Case is updated and all final cost figures, schedule deliverables, and performance goals are accurately reported.

The final Business Case is prepared by the Project Sponsor and the Project Manager. It is sent forward through their Bureau IRB and the Bureau Head for review. If approved, it is submitted to the AMT. If not, it is returned to the Project Sponsor and Project Manager for rework.

***9. Submit Completion Business Case to OMB (Project Close Out)***

The AMT, in coordination with the MIT reviews the final completion report and if appropriate recommends to the MEC and ultimately to the Secretary that it be forwarded to OMB for close out.

### 3.3.4 Exit Criteria

Prior to exiting the Control Phase, investments must have:

- Completed all project investments
- Project warrantee period underway
- Obtained Secretarial approval to enter the Evaluation Phase

# SECTION 4—EVALUATE PHASE

## 3.4.1 Purpose

The purpose of the Evaluate Phase is to compare actual to expected results after an investment is fully constructed. This is done to assess the investment's impact on mission performance, identify deficiencies while the project is still under warranty, identify the level of customer satisfaction, and revise the investment management process based on lessons learned.

The Evaluate Phase focuses on outcomes:

- Determining whether the capital construction investments have met their performance, cost, and schedule objectives;
- Determining the extent to which the capital investment management process improved the outcome of the investment;
- Determining the extent to which the construction project was constructed in accordance with plans and specifications and correcting any deficiencies identified during the warranty period;
- Determining weather the facility is meeting the customer requirements for which it was constructed; and
- Determining overall customer satisfaction.

The outcomes are measured by collecting performance data, comparing actual to projected performance and conducting a Post Occupancy Evaluation (POE). The POE includes a methodical assessment of the investment costs, performance, benefits, and level of customer satisfaction. The Bureau conducts the POE and the results are shared within the bureau and other bureaus within the agency that would benefit from the information.

## 3.4.2 Entry Criteria

The Evaluate Phase begins once the project has been accepted and occupancy or other use of the facility begins. Prior to entering the Evaluate Phase the investments must have:

- Completed construction, and held a final inspection;
- Issued appropriate contracting documents to the contractor-indicating acceptance of the project; and
- Completed a final OMB Exhibit 300 form.

## 3.4.3 Process

In the Evaluate Phase, construction projects move from implementation or termination to warranty and maintenance. From the time the project is completed it is monitored for performance, reliability, sustainability, and user satisfaction. During the POE information is gathered and compared against the original stated project performance. Then lessons learned from the POE are shared with applicable audiences.

**Table 3.4-1** provides a summary of the Evaluate Process, as well as the individual(s) and/or groups responsible for completing each process step. Each step is detailed in the following table.

| No. | Process Step | Responsible Individual(s) or Group(s) |
|---|---|---|
| 1 | Prepare Construction Completion Report | Project Sponsor |
| 2 | Monitor Warranty Period | Project Sponsor/Project Manager |
| 3 | Conduct Post Occupancy Evaluation | Project Manager |
| 4 | Prepare Post Occupancy Report | Project Manager |
| 5 | Document and Share Best Practices/Lessons Learned within Bureau and with the Executive CPIC | Program Manager |
| 6 | Distribute Shares Best Practices/Lessons Learned Department Wide | AMT/Bureau Investment Review Board |

***Table 3.4-1***

### *1. Prepare Construction Completion Report*

The construction completion report is completed after the facility has been accepted from the construction contractor. Preparation of the construction completion report is preceded by final payment to the contractor and final acceptance of the facility by the government. The construction completion report documents actual expenditures, performance, schedule, and other budgetary issues associated with the project. The project and its assets is entered into the Bureau real property inventory and the assets are reported into the Federal Real Property Profile (FRPP). Any assets disposed of as part of the project also need to reported into the FRPP.

### *2. Monitor Warranty Period*

During the warranty period the project sponsor or project manager compares the facility performance against the contract warranties. When specified performance is not met the contractor or manufacturer is notified of the performance deficiency and requested to repair or replace the defective parts or systems. It is critical to document product and system performance failures during the warranty period since this information is shared as part of the best practices and lesson learned occurring at the end of Evaluate Phase. During the warrant period the project sponsor must be careful to avoid maintenance and operational practices that void product or systems warranties. Depending on the specific product or system, the warranty my cover the products for as little as 1 year or for as long as 20 years.

### *3. Conduct Post Occupancy Evaluation (POE)*

The POE generally occurs after the facility has been in use for approximately 1 year. By delaying the POE for approximately 1 year the users of the facility have been able to develop a understanding of the facility operates and if the performance a originally specified is being met, and if the original performance was stated properly. At the heart of the evaluation is the investment analysis; the Project Manager and Project Sponsor review the impact the project has had on customers, the mission and program and the technical capability. As a result of the evaluation the Project Sponsor provides information back through project manager to the program manager and the Bureau Investment Review Board.

The evaluation focuses on three areas:

- Impact to stakeholders and customers. The Project Manager typically measures the impacts of the construction project on customers, both internal and external, and on stakeholders through user surveys, interviews, and feedback studies.
- Ability to deliver the performance measures. The construction projects impact to mission and program should be carefully evaluated to determine whether the project delivered expect results when compared to the investment's original performance goals. The projects original performance goals are also re-evaluated to determine whether they were properly set to maximize to support or impact the mission goals.

- Ability to meet baseline goals. The following areas should be reviewed to determine whether the investment is meeting its baseline goals.
  - Cost-Is the project meeting the life cycle cost projections.
  - Sustainable practices-Determine whether the sustainable features originally designed into the project are functioning as anticipated.
  - User expectations-Determine if the facility is meeting user expectations as originally prescribed. As an example this might include accessibility, interpretative features ability to communicate their story, maintainability, office space meeting user needs, and functionality of spaces.
  - Stakeholders-Determine if the facility is meeting stakeholder expectations or regulatory requirements. This might include coordination with stakeholders in areas such as air and water quality to assure state or local regulations are being met.

***4. Prepare Post Occupancy Report***

When the POE is complete the project manager prepares a Post Occupancy Report documenting the results of the evaluation. The report is submitted to the Program Manager for review and approval.

***5. Document and Share Best Practices/Lessons Learned***

The Program Manager shares information contained within the Post Occupancy Report with bureau design groups, and project sponsors with similar projects, their Bureau's Investment Review Board, Asset Management Team (AMT), other program managers who could benefit from the information.

The best practices/lessons learned form the basis for developing performance measures on future projects.

***6. Distribute Summary of Best Practices/Lessons Learned Department Wide***

AMT consolidates best practices/lessons learned received from the bureaus and prepares an annual report for Departmentwide dissemination of best practices/lessons learned that is shared with the bureaus.

### 3.4.4 Exit Criteria

Prior to exiting the Evaluate Phase investments must have:

- Completed a Construction
- Completion Report
- Conducted a Post Occupancy Evaluation
- Completed a Post Occupancy Report

## SECTION 5—MANAGEMENT IN-USE PHASE

### 3.5.1 Purpose

The Management In-Use Phase provides the means to assess mature capital investments, ascertain their continued effectiveness in supporting mission requirements, evaluate the cost of ongoing maintenance requirements, and consider potential retirement or replacement of the capital investment. The primary review focus during this Phase is on the mission support, cost, and condition assessment. Process activities during the Management In-Use Phase provide the foundation to ensure mission alignment and support for optimum facility operation and ongoing maintenance plans. Capital Planning and Investment Control processes should lead to overall reductions or stabilization in costs during the Management-In-Use of all Capital Assets. Capital Planning and Investment Control processes should lead to overall reductions or stabilization in costs during the Management-In-Use of all Capital Assets.

### 3.5.2 Entry Criteria

Prior to entering the Management In-Use Phase, investments must have:

- Prepared a Completion Report
- Conducted a Post Occupancy Evaluation
- Prepared a Post Occupancy Report

### 3.5.3 Process

During the Management In-Use Phase, mission analysis is used to determine whether mature investments are optimally continuing to support mission and user requirements. An assessment of facility deficiencies and needs is conducted in the form of an annual Condition Assessment.

**Table 3.5-1** provides a summary of the Management In-Use Phase process, as well as the individual(s) and/or group(s) responsible for completing each process step. Each step is detailed following the figure.

| No. | Process Step | Responsible Individual(s) or Group(s) |
|---|---|---|
| 1 | Prepare Facility Maintenance Plan. | Facility Manager |
| 2 | Evaluate facility operation against maintenance plan. | Facility Manager/Program Manager |
| 3 | Identify facility deficiencies and needs. | Facility Manager/Program Manager |

| No. | Process Step | Responsible Individual(s) or Group(s) |
|---|---|---|
| 4 | Quantify needs and prepare initial project description and justification | Project Sponsor |

**Table 3.5-1. Management In-Use Process Flow**

***1. Prepare Facility Maintenance Plan***
The Facility Manager prepares a Maintenance Plan to determine if the mature investment is continuing to meet operational requirements and needs and supports the DOI evolving strategic direction. The needs analysis conducted in the Pre-Select Phase provides a framework to assist in the Facility Maintenance Plan for the Management In-Use Phase. This includes an analysis of current operational requirements balanced against initially defined facility needs.

***2. Evaluate Facility Operations Against Maintenance Plan***
The Facility Manager and/or Program Manager evaluate the current facility functions and operations against the Maintenance Plan. This information should be used to assess and update the facilities performance and predict and prevent system failures.

***3. Identify Facility Deficiencies and Needs***
The Facility Manager and/or Program Manager conducts a Facility Condition Assessment, which identifies and itemizes the facility deficiencies. A current inventory of real property items is conducted and validated. The inventory of items is evaluated from a life cycle perspective, deficiencies are itemized and a cost estimate is prepared. Critical to this step is an accurate and current inventory maintained in the Federal Real Property Profile (FRPP) and the analysis of the performance metrics using the Dashboard of Performance Indicators and FRPP Performance Assessment Tool.

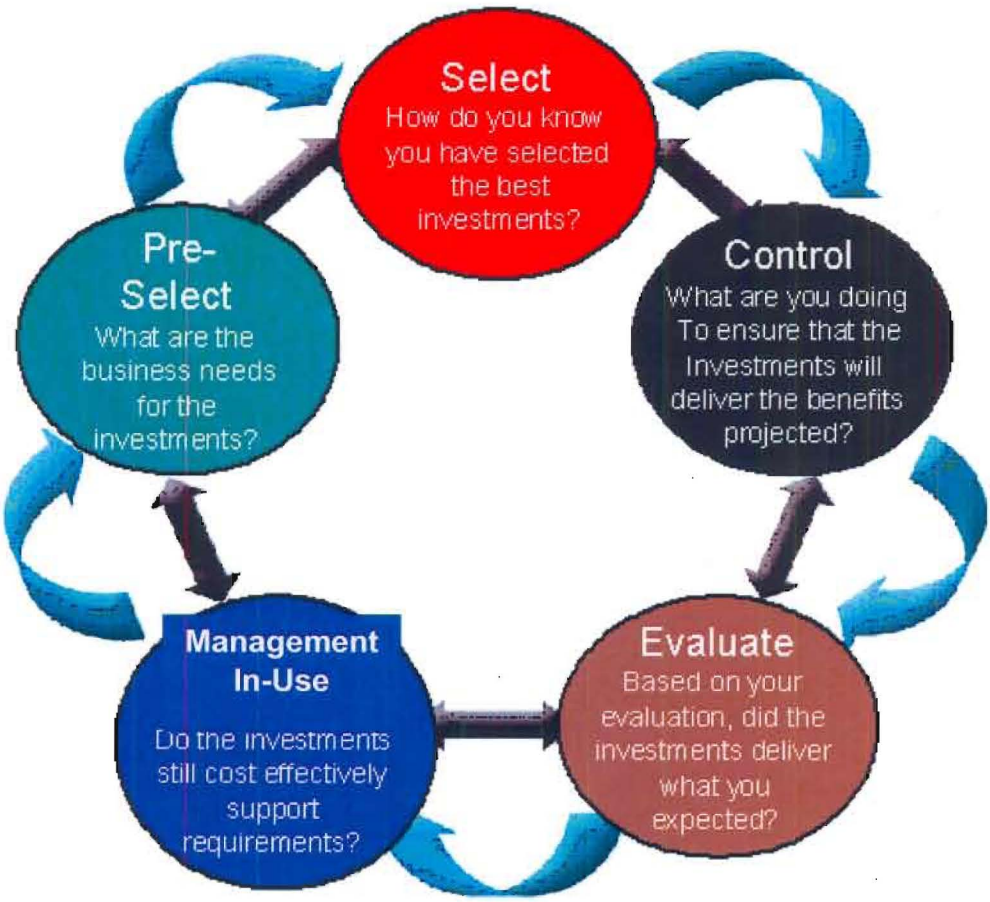
***4. Quantify Needs and Prepare Initial Project Description and Justification***
The Project Sponsor reviews the individual asset condition assessments and prioritizes deficiencies in alignment with overall mission needs. Identified projects are categorized as deferred maintenance projects and are submitted into the budget cycle. Project descriptions and justifications are prepared in anticipation of the initiation of a corrective action project. If an asset no longer meets the needs of the facility or the cost to rehabilitate the asset is not cost-effective, disposition of the asset will need to be pursued. Such an asset, will be added to the bureau's multi-year List of Candidate Assets for Disposition.

Corrective action projects are prioritized and moved forward into the next process step – Pre-Selection.

### 3.5.4 Exit Criteria

Prior to exiting the Management In-Use Phase investments must be analyzed and a concept proposed that meets mission needs for the disposal, retirement, rehabilitation, or replacement of the facility.

# Appendices


Select
How do you know you have selected the best investments?
Control
What are you doing To ensure that the Investments will deliver the benefits projected?
Evaluate
Based on your evaluation, did the investments deliver what you expected?
Management In-Use
Do the investments still cost effectively support requirements?
Pre-Select
What are the business needs for the investments?